

THE  
ILLUSTRATED  
LONDON

ALMANACK



1847

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## INTRODUCTION.

THE present or Third ILLUSTRATED LONDON ALMANACK is submitted to the public by the Proprietors, with confidence of its superiority over its predecessors.

The work was commenced in 1845, with a view of furnishing a Repository of Useful Knowledge of permanent value, for constant reference, in Astronomy, Astronomical Occurrences, and the Natural History of the Year; and the peculiar value of the present Almanack, in these respects, will be best shown by the following explanatory summary:—

For information relative to the ASTRONOMICAL DEPARTMENT, which has been entirely under the Superintendence of JAMES GLAISHER, Esq., F.R.A.S., and of the Royal Observatory at Greenwich, the reader is referred to

**SUN RISING AND SETTING.**—In the computation of the Times of the Rising and Setting of the Sun, for this Almanack, a correction of 34' for refraction has been taken into account; the effect of refraction causes him to appear above the horizon sooner in the morning, and later in the afternoon than he actually is. So that at the time indicated in the Calendar pages, as that of Sunrise or Sunset, his centre is 90 deg. 34m. from the Zenith; though he appears to be only 90 deg. The amount of the correction for refraction varies at every place with the declination of the Sun; and on the same day is different in different latitudes. An Auxiliary Sun-rising Table has been computed, including the correction. (See page 54.) By the use of this table, the times of Sun Rising and Setting at any place in the British Isles is readily found by attending to the rules there given.

**MOON RISING, SETTING, AND SOUTHING.**—In calculating the time of the Moon's Rising and Setting, 34' has been allowed for refraction, and 57' for parallax; and the calculations are adapted for London. They will be sufficiently near for all places having the same latitude as that city, (for list of these places see auxiliary table for Sun Rising in page 54). The times will be very nearly the same at every place in the British Isles when the Moon is on the Equator. At times when she has North Declination she will rise earlier, and set later at all places N. of London; and she will rise later and set earlier at all places S. of London. At times when she has South declination, she rises later and sets earlier at all places N. of London; and she rises earlier and sets later at all places S. of London than the times at London.

The Times of Southing have been computed for London, and they are true for all places having the same longitude, or for all places situated due N. or S. of London. To all places East of this N. and S. line, the times are somewhat earlier; and to all places W. of the same line, they are somewhat later than those given in the Almanack.

**DURATION OF MOONLIGHT.**—To enable persons by a cursory glance to see the hours of Moonlight, as well as to observe the comparative degrees of it, illustrated or tinted columns are given. At times when the Moon is below the horizon, the hour space is dark, and it is light when she is above the horizon; and these are sufficiently near for the whole country.

**EQUATION OF TIME.**—The interval of time between the Sun being on the Meridian or Southing, on one day, and his being on the Meridian or Southing the next day, is not always the same; and, therefore, Solar days are not equal in duration; about one-half are a little more, and about one-half are a little less than 24 hours. A clock regulated by the Sun, or the Sun-dial, would need frequent adjustment; to avoid this, an imaginary Sun is supposed to move, so that the interval of time between its consecutive passages over the Meridian is always the same, viz., 24 hours; such a time represents a mean solar day, and it is the average of all the apparent solar days in a year. The difference of time between the imaginary Sun and the true Sun passing the Meridian, is called the "Equation of Time," the amount of which at noon on every day, is inserted in the Almanack. There are only four days in the year when apparent and mean time are the same, or the Equation of time is nothing. In the year 1847, these days are April 15, June 15, September 1, and December 25. Between April 15 and June 15, and between September 1, and December 25, the imaginary Sun follows the true Sun, and the "Equation of time" is subtractive; the true time being earlier than that shown by the Sun. Between June 15 and September 1, and between December 25 and April 15, the imaginary Sun precedes the true Sun, and the "Equation of time" is additive. By the assistance of the numbers in this column, a clock can be set by a sun-dial as follows. When "Add" is placed above the number opposite to the day, then the clock ought to be set fast on the time shown by the sun-dial, and when "Subtract" is placed above the numbers, the clock ought to be set so much slower.

Example—When the Sun shows noon on the sun-dial on June 1, and July 1, what are the true times?

On June 1, from the Almanack, the Equation of time is, Subtract, 2m. 36s., therefore the clock should be 2m. 36s. before noon; so the true time is 11h. 57m. 24s. A.M. On July 1, from the Almanack, the Equation of time is, Add, 3m. 22s., therefore the clock should be 3m. 22s. after-noon, or the true time is 0h. 3m. 22s. P.M.

The greatest difference between mean time (common clock time) and apparent time (time by the sun-dial) occurs on the 3rd of November, and it is 16m. 17s. subtractive; and the instant the Sun's centre is on the Meridian, or Southing, or the time by a sun-dial indicates noon, the time by a clock regulated to mean time, should be 16m. 17s. to noon, or the true time is 11h. 43m. 43s. A.M. On the 11th day of February, the greatest additive difference occurs, viz., 14m. 32s., and when the Sun is on the Meridian, or noon is shown by a sun-dial, a clock regulated to mean time, should be 14m. 32s. after-noon, or the true time would be 0h. 14m. 32s. P.M. All the calculations throughout this Almanack have been adapted to London mean time. Mean time is easily reduced to apparent, by applying the Equation the reverse to that mentioned in the Almanack.

**ASTRONOMICAL PHENOMENA DURING THE MONTH.**—The constellation in which the Moon is on every day is always mentioned, so that persons can very easily learn the Zodiacal constellations by this means; when she is on the Equator, and when she has N. declination (which is the interval of time between being on the Equator and going N. till she is on the Equator again); and, when she has S. declination (which is the interval of time between being on the Equator and going S. till she is again on the Equator). Also, all the interesting phenomena relative to the Planets are mentioned. In these accounts frequent mention is made of angular distance, (For method of estimating, see Almanack of last year, October).

**ECLIPSE OF THE SUN ON OCTOBER 9.**—This fine Eclipse will be visible throughout the British Isles, and annular across the whole of France, and the south of England (See the Chart). A very great diminution of light during the continuance of the Eclipse is not to be expected. It is possible that the Planets Venus and Jupiter may be visible to the naked eye, Mars is also above the horizon, and Mercury will rise at 7h. 33m. A.M., being about the time of the middle of the Eclipse.

**TWILIGHT.**—Twilight is the faint light which precedes sunrise or follows sunset. It is caused by a portion of the Sun's rays, which, after refraction, are reflected at the surface of our atmosphere. The time has been calculated on the supposition that day breaks when the Sun is 18 deg. below the horizon, the quantity usually assumed, but which is probably too great by 4 or 5 degrees.

**PHASES OF THE MOON.**—The times of the Phases of the Moon are computed for the Meridian of London, but may be easily reduced to that or any other Meridian, by adding or subtracting the difference of longitude in time, according as the same is E. or W. of that city.

**LE VERRIER'S PLANET.**—In our Almanack it will be seen that the Planet Uranus is always placed last, it being supposed that it was the last and farthest of the Planets from the Sun; but, the month of September, 1846, witnessed one of the most remarkable triumphs of Theoretical Astronomy ever recorded; viz., the discovery of a New Planet, beyond Uranus, far exceeding him in size. Its existence was established; its orbit and its place in the heavens pointed out, three weeks before its discovery. The merit belongs to M. Le Verrier alone; who performed these calculations, and published them for the guidance of Astronomers. The history of the discovery, with other particulars, will be found at page 55.

All the headings of the other tables, &c., explain themselves.

On the Third Page of each month is a series of *tableaux* of memorable events, carrying out in a true spirit what is usually and properly introduced into our Almanack; not for occasional reference only, but to cherish respect for these landmarks of British History.

The Fourth Page of each month, as in last year's Almanack, is devoted to Natural History. The whole of this portion is from the very able pen of the well-known Author of several Works on Botany and Natural History, Mrs. LOUDON; and the interesting series of Illustrations to this department has been drawn and engraved by Miss LOUDON, under the immediate superintendence of Mrs. LOUDON; and will, therefore, be a sufficient guarantee of sound information.

The Illustrations heading the Calendar, are from the masterly pencil of WILLIAM HARVEY, and engraved in the first style of art, by LINTON, Illustrative of the National Sports in the countries of the Earth particularised.

The remaining portion of the Almanack is fully occupied with Useful Tables, &c., corrected to the latest moment before going to press.

The Index of the Contents will be found upon the last page.

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## ON THE CALENDAR.

THE SUN naturally regulates the beginnings, durations, and ends of the seasons; and the Calendar is constructed to arrange the smaller portions of the year. The Calendar divides the year into 12 months, containing 365 days. It is desirable that the same parts of the same seasons should be always denoted by the same days of the same months.

This would be the case if the civil year of 365 days were equal to the Astronomical year, but the latter is greater: and if the Calendar should invariably distribute the year into 365 days, each part of the year, (the vernal equinox for instance), would in progress of time happen on every day of the civil year.

Julius Caesar adopted the mode of correcting the Calendar by making every fourth civil year to consist of 366 days. But this Julian correction itself was found to need correction, as the length of the year became known to greater precision. This correction, at the time of Pope Gregory, in 1582, had amounted to 10 days, the vernal equinox falling on the 11th instead of the 21st of March, at which period it fell correctly at the time of the Council of Nice in the year 325. To obviate this inconvenience, Gregory ordered that the day succeeding the 4th of October, 1582, instead of being called the 5th should be called the 15th; thus suppressing 10 days. This act reformed the Calendar: in order to correct it in future ages, it was prescribed that the intercalary day of the Julian correction should be omitted at certain convenient periods.

The adoption of this change, which is called the Gregorian, or new style, did not take place in England till 1752. It was then enacted that the year should commence on the 1st of January, instead of March 25; and that in the year 1752, the days should be numbered as usual till September 2, when the day following should be accounted the 14th of September, thus emitting 11 days.

## THE PRINCIPAL ARTICLES OF THE CALENDAR, FOR THE YEAR OF OUR LORD 1847.

Gregorian or New Calendar.	Julian or Old Calendar.	New Calendar.	Old Calendar.
Dominical Letter C	E	Solar Cycle 8	8
Golden Number 5	5	Epact 14	25
Roman Indiction 5	5		

**DOMINICAL LETTER.**—The seven days of the week, reckoned as beginning on the 1st day of January, are designated by the first seven letters of the alphabet; and the one of these which denotes Sunday, is the Dominical Letter. As the present year begins on Friday, call it A, the next is B, and C falls on the Sunday, and this letter answers to the Dominical letter. If there were exactly 52 weeks in the year the Dominical letter would be always the same.

**THE GOLDEN NUMBER.**—At the end of every 19 years the new and full Moons happen at very nearly the same times of the year. This "Cycle of the Moon" terminated the year before the Christian era. Therefore, to find the golden number, or number of year in this cycle, add 1 to the date; divide the sum by 19; the quotient is the number of cycles of the moon since the birth of Christ, and the remainder is the golden number, so called from its being marked by the Greeks in letters of gold. As the present year is 1847, this number increased by 1 is 1848, and divided by 19, is 97 cycles, and there remains 5, the golden number.

**THE SOLAR CYCLE,** is the number of years that elapse before the Sunday's throughout the year happen on the same days of the month. This cycle is 28 years; and 9 years of the Cycle had elapsed before the birth of Christ. Therefore, to find the cycle of the Sun, add 9 to the given year, and divide by 28; the quotient is the number of cycles since the birth of Christ; and the remainder is the cycle of the Sun, as, for this year, add 9 to 1847 the sum is 1856; which, divided by 28, the quotient is 66 cycles, and the remainder is 8, the solar cycle.

**THE EPACT** is the Moon's age for the 1st day of January, and it is the difference between the beginning of the solar and the lunar year.

**THE ROMAN INDUCTION.**—This cycle has no connexion with the motions of the Sun and Moon, except that it consists of 15 years. It was established by the Emperor Constantine in the year 312, regulating certain payments due by the Roman Landholders to their Government.

## CORRESPONDENCE OF THE YEAR 1847 WITH ANCIENT ERAS.

The year of the Julian Period	6560	From the foundation of Rome	2600
From the first Olympiad	2623	From the epoch of Nebozasser	2594

## FIXED AND MOVEABLE FESTIVALS, ANNIVERSARIES, &c.

Epiphany	Jan. 6	Pentecost—Whit Sunday	May 23
Martyrdom of King Charles I.	30	Birth of Queen Victoria	24
Septuagesima Sunday	31	Restoration of King Chas. II.	29
Quinquagesima—Shrove Sun.	Feb. 14	Trinity Sunday	30
Ash Wednesday	17	Corpus Christi	June 3
Quadragesima—1st Sunday	21	Accession of Queen Victoria	20
in Lent	21	Proclamation	21
St. David	March 1	St. John Baptist—Midsum-	24
St. Patrick	17	mer Day	24
Annunciation—Lady Day	25	Birth of Dowager Queen	13
Palm Sunday	28	Adelaide	Aug. 13
Good Friday	April 2	St. Michael—Michaelmas Day	29
EASTER SUNDAY	4	Gunpowder Plot	Nov. 5
Low Sunday	11	Birth of Prince of Wales	9
St. George	23	1st Sunday in Advent	28
Rogation Sunday	May 9	St. Andrew	30
Ascension Day—Holy Thurs-	13	St. Thomas	Dec. 21
day	13	Christmas Day	25

## ASTRONOMICAL SYMBOLS AND ABBREVIATIONS EXPLAINED.

☉ The Sun	☐ Quadrature	S Seconds of Time
☾ The Moon	☊ Opposition	♈ Aries
☿ Mercury	♋ Ascending Node	♉ Taurus
♀ Venus	♌ Descending Node	♊ Gemini
♁ or ♂ The Earth	N. North	♋ Cancer
♂ Mars	E. East	♌ Leo
♊ Vesta	S. South	♍ Virgo
♋ Juno	W. West	♎ Libra
♌ Pallas	° Degrees	♏ Scorpio
♍ Ceres	' Minutes of Arc	♐ Sagittarius
♎ Jupiter	" Seconds of Arc	♑ Capricornus
♏ Saturn	H Hours	♒ Aquarius
♐ Uranus	M Minutes of Time	♓ Pisces
♑ Conjunction		

Two celestial objects are said to be in conjunction when they have the same longitude; to be in quadrature when their longitudes differ by 90 deg.; and to be in opposition when this difference amounts to 180 deg.

## CALENDAR OF THE JEWS, FOR THE YEAR 1847

5607	1846	NEW MOONS AND FEASTS
Tebeth .. 1	December .. 2	Fast: Siege of Jerusalem
" .. 10	" 1847	
Schebat .. 1	January .. 18	Elias
" .. 5	" .. 22	Xylophoria
" .. 9	" .. 26	Fast: Memory of the War of the Ten Tribes against Benjamin
" .. 23	February .. 9	
Adar .. 1	" .. 17	Fast for the Death of Moses
" .. 7	" .. 23	Fast: Esther
" .. 13	March .. 1	Purim: Feast of Haman
" .. 14	" .. 2	Schuschan Purim
" .. 15	" .. 3	
Nisan .. 1	" .. 18	Passover begins
" .. 15	April .. 1	Second day
" .. 16	" .. 2	Seventh day
" .. 21	" .. 7	Passover ends
" .. 22	" .. 8	Fast: the Death of Joshua
" .. 26	" .. 12	
Ijar .. 1	" .. 17	Consecration of the Temple
" .. 7	" .. 23	Pasah Schemi
" .. 14	" .. 30	Lag Beomer
" .. 18	May .. 4	
Sivan .. 1	" .. 16	Pentecost Holidays, the Feast of Weeks
" .. 6	" .. 21	Second day
" .. 7	" .. 22	Victory of Maccabees
" .. 15	" .. 30	
Tamuz .. 1	June .. 15	Fast: Seizure of the Temple by Titus
" .. 17	July .. 1	
Ab .. 1	" .. 14	Fast: Destruction of the Temple
" .. 9	" .. 22	
Elul .. 1	August .. 13	Selihot: beginning of the 40 days prayer
" .. 3	" .. 15	Consecration of the walls of Jerusalem
" .. 7	" .. 19	Fast: the end of the year 5607
" .. 29	September .. 10	
5608		
Tisri .. 1	" .. 11	Feast of the new year, 5608
" .. 2	" .. 12	Second day
" .. 3	" .. 13	Fast: Death of Gedaliah
" .. 7	" .. 17	Fast: for the Worship of the Golden Cal.
" .. 10	" .. 20	Fast: Day of Atonement
" .. 15	" .. 25	Feast of Tabernacles
" .. 16	" .. 26	Second day of the Feast
" .. 21	October .. 1	Feast of Branches
" .. 22	" .. 2	End of the Feast of Tabernacles
" .. 23	" .. 3	Feast of the Law
Marchesvan .. 1	" .. 11	Fast: for the Destruction of Jerusalem
" .. 6	" .. 16	
Kislev .. 1	November .. 9	Feast of the Dedication of the Temple
" .. 25	December .. 3	
Tebeth .. 1	" .. 8	Fast: the Siege of Jerusalem
" .. 10	" .. 17	

## THE MONTHS OF THE TURKISH CALENDAR.

Hegiri	1263,	Moharrem 1	(New year)	falls on December 20, 1846.
..	..	Safar 1	..	January 19, 1847.
..	..	Rebi el-Awwel 1	..	February 17, ..
..	..	Rebi el-Accher 1	..	March 19, ..
..	..	Dschemadi el-Awwel 1	..	April 17, ..
..	..	Dschemadi el-Accher 1	..	May 17, ..
..	..	Redscheb 1	..	June 15, ..
..	..	Schaban 1	..	July 15, ..
..	..	Ramadan 1	(Month of Abstinence observed by the Turks)	August 13, ..
..	..	Schewal 1	..	September 12, ..
..	..	Dsu'l-Kade 1	..	October 11, ..
..	..	Dsu'l-hedsch 1	..	November 10, ..
..	1264,	Moharrem 1	..	December 9, ..

## LAW TERMS, 1847.

As Settled by Statutes 1, William IV., Cap. 70, S. 6 (passed July, 23rd, 1830)  
Cap. 3, S. 2 (passed, December 23rd, 1830.)

Hilary Term	..	Begins January 11	Ends February 1
Easter Term	..	" April 15	" May 8
Trinity Term	..	" May 22	" June 12
Michaelmas	..	" Nov. 2	" Nov. 25

## UNIVERSITY TERMS, 1847. OXFORD.

TERMS	BEGINS	ENDS
Lent ..	January 14	March 27
Easter ..	April 14	May 22
Trinity ..	May 26	July 10
Michaelmas ..	October 11	December 17

The Act, July 6

## CAMBRIDGE.

TERMS	BEGINS	DIVIDES	ENDS
Lent ..	Jan. 13	Feb. 18, Noon	March 26
Easter ..	April 14	May 27, Noon	July ..
Trinity ..	Oct. 10	Nov. 12 Midnight	Dec. 16
Michaelmas ..			

The Commencement, July 6



NATIONAL SPORT, ENGLAND—  
STAG HUNT.

M	D	W	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER			EQUA- TION OF TIME.	Day of the Year.
				Rises.	Sets.	DECLINA- TION South.	Rises.	SOUTH.	Sets.	Before Sunrise.	After Sunset.	Moons Age.	Morning	Afternoon	Add.		
				h. m.	h. m.	Deg. Min.	h. m.	h. m.	h. m.	O'Clock.	O'Clock.	h. m.	h. m.	h. m.	m. s.		
1	F		<i>Circumcision</i>	8 84	0 23	2	4 33		7 22			0	1 42	2 6	3 43	1	
2	S		The Sun rises 3 deg. S. of S.E. by E.	8 84	1 22	57	5 31	0 22	8 5			15	2 26	2 47	4 11	2	
3	S		<b>2ND SUNDAY AFT.</b>	8 84	2 22	52	6 35	1 10	8 39			16	3 7	3 26	4 39	3	
4	M		Christmas	8 84	3 22	46	7 37	1 57	9 9			17	3 43	3 59	5 7	4	
5	Tu		α Arietis Souths 7h. 0m. P.M.	8 84	4 22	39	8 42	2 41	9 32			18	4 18	4 36	5 34	5	
6	W		<i>Epiphany, Twelfth</i>	8 74	6 22	33	9 43	3 25	9 58			19	4 51	5 9	6 1	6	
7	Th		Day	8 74	7 22	25	10 46	4 7	10 21			20	5 26	5 43	6 27	7	
8	F		<i>St. Lucian</i>	8 74	8 22	17	11 48	4 49	10 43			21	6 2	6 20	6 52	8	
9	S		α Ceti Souths 7h. 39m. P.M.	8 64	9 22	9	Morning.	5 31	11 6			22	6 39	6 59	7 18	9	
10	S		<b>1ST S. AFT. EPIPH.</b>	8 64	10 22	1	0 51	6 15	11 30			23	7 18	7 44	7 42	10	
11	M		Hilary Term begins	8 54	11 21	52	1 58	7 2	11 59			24	8 14	8 50	8 7	11	
12	Tu		Plough Monday	8 44	13 21	42	3 4	7 51	Afternoon			25	9 23	9 58	8 30	12	
13	W		<b>Cambridge T. beg.</b>	8 34	14 21	32	4 9	8 43	1 15			26	10 36	11 13	8 53	13	
14	Th		<b>Oxford Term beg.</b>	8 24	16 21	22	5 10	9 38	2 4			27	11 49		9 16	14	
15	F		The Sun rises S.E. by E. and sets S.W. by W.	8 24	18 21	11	6 9	10 36	3 5			28	0 18	0 45	9 37	15	
16	S		<b>Bat. Corunna, 1809</b>	8 14	19 21	0	7 1	11 35	4 18			29	1 10	1 36	9 58	16	
17	S		<b>2ND SUNDAY AFT.</b>	8 04	21 20	48	7 35	Afternoon	5 31			30	1 59	2 23	10 19	17	
18	M		EPIPHANY	7 59	22 20	36	8 23	1 32	6 52			1	2 46	3 9	10 38	18	
19	Tu		Capella Souths 9h. 10m. P.M.	7 58	24 20	24	8 56	2 28	8 12			2	3 31	3 53	10 57	19	
20	W		<b>Rigel Souths at</b>	7 57	25 20	11	9 25	3 22	9 32			3	4 14	4 37	11 15	20	
21	Th		9h. 5m. P.M., 30 deg. high	7 56	27 19	58	9 55	4 15	10 49			4	5 0	5 23	11 33	21	
22	F		α Orionis Sou. 9h. 40m. P.M.	7 55	29 19	45	10 22	5 7	Morning			5	5 45	6 9	11 50	22	
23	S			7 54	31 19	31	10 51	5 59	0 5			6	6 33	6 57	12 5	23	
24	S		<b>3RD SUNDAY AFT.</b>	7 53	33 19	17	11 23	6 51	1 19			7	7 22	7 52	12 20	24	
25	M		EPIPHANY — Pitt died, 1806	7 51	35 19	2	Afternoon	7 43	2 28			8	8 23	9 0	12 35	25	
26	Tu			7 50	37 18	47	0 43	8 35	3 32			9	9 37	10 17	12 48	26	
27	W		<b>Aldebaran souths</b>	7 48	39 18	32	1 31	9 26	4 30			10	10 58	11 36	13 1	27	
28	Th		at 8h. 1m. P.M. 55 deg. high	7 47	40 18	17	2 25	10 17	5 21			11		0 12	13 12	28	
29	F		Mercury rises 7h. 13m. A.M.	7 45	41 18	1	3 23	11 6	6 4			12	0 40	1 7	13 23	29	
30	S		<b>Martyr. K. Chas. I.</b>	7 44	43 17	45	4 25	11 53	6 42			13	1 32	1 54	13 33	30	
31	S		<b>SEPTUAGES. SUN.</b>	7 43	45 17	28	5 27	After Midnight	7 11			14	2 15	2 32	13 43	31	

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## JANUARY.

THE MOON is full on the 1st. She is in the constellation Gemini, and directing her course towards a point 15° S. of Castor and Pollux, which she passes before rising in the afternoon of the 2nd. On the 2nd and 3rd she is in Cancer, passing through a barren space, but directing her course towards Regulus. On the 4th 5th, and 6th, she is in Leo and Sextans: on the 5th, she will rise a little before Regulus, and she is moving towards Spica Virginis. On the 7th, at 5h. p.m., she is on the Equator and moving Southward. From the 7th, to the 10th, she is in Virgo; on the morning of the 10th, she will rise a little before Spica Virginis. On the 11th, and 12th, she is in Libra, her course being towards a point a few degrees N. of Antares, which star she passes about noon on the 13th, so that during the morning of the 14th, she will be E. of that star, being at the time in Ophiuchus. On the 15th, she is in Aquila, and crosses the Milky Way; on the 17th, she is in Capricornus, and new, but without an eclipse, as she is then nearly 5° from the line joining the Sun and the Earth. On the 18th, and 19th, she is in Aquarius; on the 20th, at 10h. p.m., she is on the Equator, and moving N.; on the 21st, and 22nd, she is in Pisces; the crescent of the Moon is seen after sunset, in the W. on the 21st, nearly in a line with Beta and Gamma Pegasi, two of the stars forming the square of Pegasus. On the 23d, and 24th, she is in Aries; on the 25th, 26th, and 27th she is in Taurus, being on the 25th, a few degrees S. of the Pleiades, and directing her course between Aldebaran and Jupiter, which she will pass before the evening of the 26th, during which she will be due E. of Aldebaran. On the 27th, she will cross the Milky Way; on the 28th, and 29th, she will be in Gemini, on the former day being S.W., and on the latter day S.E. of Castor and Pollux. On the 30th, and 31st, she will be in the barren region of Cancer.

MERCURY will be in the constellation of Ophiuchus between January 1st, and 10th; in that of Sagittarius between the 10th, and the 29th; and on the latter day will pass into Capricornus. He is favourably situated for observing before sunrise. On the 1st, he rises at 6h. 18m. A.M., at the S.E. by E. point of the horizon; he is situated in an imaginary line from the Pole Star, through Alpha Herculis, and continued 36° from the latter star; he is also about 13° W. of Antares. On the 16th, he rises at 6h. 57m. A.M. near the S.E. by E.; he is situated in the line joining the Pole Star and Alpha Lyrae, produced to the distance of 62° from the latter star; On the 27th, he is situated in the line joining the Pole Star and Alpha Aquila, produced to the distance of 31° from the latter star. On the 14th day, before sunrise, he will be about 4° South of the Moon; on the 24th day, at 5h. 35m. A.M. he will be at his greatest distance from the Sun.

VENUS will be in the constellation of Sagittarius till the 11th, and in that of Capricornus after that time. On the 1st, she souths at 0h. 21m. p.m., at the altitude of 15°, and sets at 4h. 14m. p.m. near the S.W. by W. point of the horizon. On the last day she souths at 1h. 0m. p.m. at the altitude of 23°, and sets at 5h. 42m. near the W.S.W. On the 1st, she is about 33° S.S.W. of Alpha Aquila; on the 8th, she is situated in the line joining the Pole Star, and Alpha Aquila, and at the distance of 31° from the latter star; On the 17th, and 18th, she is situated in the line joining the Pole Star, and that remarkable group of stars a little to the E. of Alpha Aquila called Delphinus, and at the distance of 35° from them. On the former of those days she is situated about 6° below the moon. On the 27th, she is in a line joining the Pole Star and Beta Aquarii, at the distance of 9° S. of the latter star. She will be an evening star from January 1st, to the middle of September. On the 13th, at 5h. 44m. p.m. she will be at her greatest distance from the Sun.

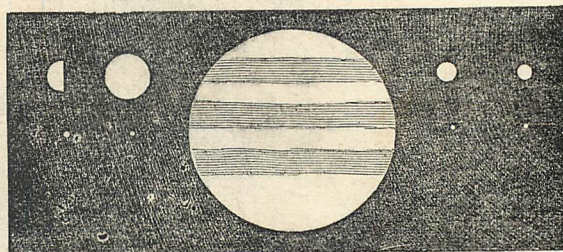
MARS will be in the constellation Scorpio till the 4th; in that of Ophiuchus between the 4th and the 27th; and in that of Sagittarius after the 27th. He is a morning star. From the 1st to the 11th, he rises at 5h. 4m. A.M.; on the 16th, at 5h. 2m. A.M., and on the 31st at 4h. 56m. A.M.; at the S.E. by E. point of the horizon throughout the month. On January 1st, he is situated about 9° N.W. of Antares, and about 1° below Beta Scorpil, a star of the 3rd magnitude; he is moving towards Antares till the 8th, on which day he is in an imaginary line joining the Pole Star, and Antares, and about 5° N. of the latter star; on the 24th, he is in the line joining the Pole Star and Alpha Herculis produced to the distance of 38° S. of the latter star, and at the same time he is about 12° E. of Antares; on the 30th day, he is in the line joining the Pole Star and Alpha Ophiuchi, produced to the distance of 36° from the latter star; and he is 17° E. of Antares. The Moon passes him on the 29th.

JUPITER will be in the constellation Taurus during the month, and sets at the N.W. by W. point of the horizon; on the first day, at 5h. 46m. A.M., and on the

last day at 3h. 40m. A.M. He souths on the 1st day at 9h. 42m. p.m., and on the last day at 7h. 38m. p.m., at an altitude of 59° throughout the month. He rises a little after noon, and is an evening star, and situated so as to excite much attention. The motion of this Planet among the stars is slightly westward, during the first part of the month, and at the latter part he is nearly stationary among them: during the month he is from 5° to 7° N. of Aldebaran; and from 13° decreasing to 11° East of the Pleiades. The Moon is near him on the 25th, her course being above Aldebaran and below this Planet.

### RELATIVE APPEARANCE OF THE PLANETS IN JANUARY.

MERCURY. VENUS. JUPITER. MARS. URANUS.



Scale forty seconds of arc to one inch.

SATURN will be in the constellation of Aquarius all the year. On January 1st, he sets W.S.W. at 8h. 10m. p.m.; and on the last day at 6h. 31m. p.m., near the W.S.W. point of the horizon. He souths at an altitude of 25° on every day in the month; on the 1st at 3h. 18m. p.m., and on the last day at 1h. 35m. p.m. During the month his motion is slowly eastward among the stars; on the 1st day, he, with Alpha Pegasi and Alpha Aquila, form a large triangle, of which the planet occupies the lower angle, he is 30° distance from the former, and 51° from the latter star; during the month the former distance decreases, and the latter increases by about 4°. On the 18th, the Moon is E. of him on the 19th.

URANUS will be in the constellation of Cetus till April 9th. He souths on every day in January, at an altitude of 42°, on the 1st at 5h. 56m. p.m., and on the last at 4h. 1m. p.m. He sets midway between the W. and the N. by N. points of the horizon. On the 1st, at 0h. 15m. A.M.; on the 6th, he sets twice on the same day, viz., at 0h. 3m. A.M., and again at 1h. 59m. p.m.; and on the last day, he sets at 10h. 25m. p.m. His motion among the stars is slowly E. till July. He is situated nearly in a line joining Beta and Gamma Pegasi, being 11° S.E. of the latter star. The Moon passes him at 3 o'clock in the morning of the 22nd.

### POSITION OF THE CONSTELLATIONS RISING ON THE MERIDIAN, AND SETTING ON THE 1st. DAY AT 10h. P.M.

Constellations Rising.	Constellations on the Meridian	Constellations Setting.
Corona Borealis in N. by E.	A part of Draco	Lyra in N.N.W.
The Head of Bötis in N. E.	The haunch of Ursa Major 30° above N. Horizon	The head of Cygnus in N. W. by N.
Coma Berinices in N.E. by E.	Polaris (The Pole Star)	The hind legs of Vulpecula in N.W.
The hind legs of Leo in E.	The body of Camelopardalus between Polaris and the Zenith	The head of Pegasus in W. by N.
Sextans	Auriga 80° above S. Horizon	The preceding fish of Pisces in W.
A part of Hydra in E.S.E.	The head of Taurus 60° above S. Horizon.	The tail of Cetus in S.W. by W.
A part of Argo Navis in S.E.		
The hind legs of Canis Major S.S.E.		

On February 1st, at 8h. and on March 1st, at 6h. the Constellations will occupy the same positions.

JUPITER'S SATELLITES.						OCCULTATIONS OF STARS BY THE MOON.					
Days of the Month.	Length of Day, or number of hours between sunrise and sunset.	Number of Hours and Minutes the Day has increased since the Shortest Day.	Time of Day-break, or beginning of Twilight.	Time of Twilight Ending.	Eclipses of		Names of the Stars.	Magni- tude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.	
					1st Sat.	2nd. Sat.					
					Emersion.	Emersion.					
	H. M.	H. M.	H. M.	H. M.	P. H. M.	P. H. M.			P. H. M.		
1	7 52	0 7	6 3A.M.	6 5P.M.	2 2 20 A. M.	7 11 11 P. M.	Lambda Geminorum	5	{ 2 2 9 A. M.	Bright	
6	7 59	0 14	6 2 „	6 11 „	3 8 49 P. M.	15 1 48 A. M.			3 17 „		
					10 10 45 P. M.	25 5 42 P. M.					
11	8 6	0 21	6 1 „	6 15 „	12 5 14 P. M.		Alpha 1 Cancri	6	{ 4 0 33 „	Bright	
									1 35 „	Dark	
16	8 18	0 33	5 58 „	6 22 „	18 0 40 A. M.	10 5 28 } P. M.	h Virginis	6	{ 10 1 4 „	Bright	
						10 7 54 }			1 43 „	Dark	
21	8 31	0 46	5 55 „	6 28 „	19 7 9 P. M.	17 9 29 } P. M.					
26	8 47	1 2	5 50 „	6 37 „	25 2 36 A. M.	17 11 55 }	Delta 2 Tauri	4	{ 26 2 14 „	Bright	
31	9 2	1 17	5 45 „	6 43 „	26 9 5 P. M.				3 5 „	Dark	

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.															
Days of the Month.	MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.				
	Right Ascension	Declination South.	Right Ascension	Declination South.	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.			
FULL MOON ..	1d. 2h. 42m. P.M.		1	17h. 8m.	21° 7'	19h. 3m	23° 29'	16h. 0m.	20° 24'	4h. 26m	21° 1	22h. 1m.	13° 45'	0h. 39m	3° 30'
LAST QUARTER ..	9 6 40 P.M.		6	17 32	22 15	19 30	22 49	16 15	21 6	4 24	20 58	22 3	13 35	0 40	3 32
NEW MOON ..	17 0 45 A.M.		11	18 0	23 7	19 57	21 52	16 29	21 43	4 22	20 56	22 5	13 24	0 40	3 34
FIRST QUARTER ..	23 4 18 P.M.		16	18 31	23 35	20 23	20 38	16 44	22 16	4 21	20 54	22 7	13 13	0 40	3 37
FULL MOON ..	31 8 29 A.M.		21	19 3	23 34	20 50	19 9	16 59	22 44	4 20	20 53	22 9	13 1	0 41	3 40
APOGEE ..	6 6 P.M.		26	19 36	23 1	21 15	17 27	17 14	23 7	4 20	20 52	22 11	12 49	0 41	3 44
PERIGEE ..	18 3 P.M.														

Right Ascension is Angular Distance, measured on the Equator from the first point of Aries, to the declination circle passing through the Star or Planet, expressed in time at the rate of 15 deg. per hour.

## January Anniversary.



EXECUTION OF KING CHARLES I.

## DEATH OF CHARLES I.

This "anniversary" of English history is one of the darkest, the deepest, and most impressive of any age or time; the death of Charles the First has a monumental record in our metropolis and more than a monumental record in the heart of posterity and the memories of reading men. Except those haunting themes of poetry presented in the life and death of Mary Queen of Scots, there are few subjects in English history—isolated, by their peculiar beauty and absorbing interest, from all meaner incidents—more noble in spirit, more touching in remembrance, more forcible in impression, and more absolutely appealing by their character to the imagination and very soul of the painter, than this of the last moments of the fated Monarch. The associations that crowd themselves into the memory with the characters which form the grouping of the scene—the recollection of events which immediately preceded it in the awful drama of the times—the shadows of a dark history passing in pageantry before the mind, with strange contrasted forms of rebellion and fidelity, of courage and cowardice, of virtue and treachery, of piety and blasphemy, of grace, loveliness, affection, with selfishness, ferocity and ambition: all the bad and good elements of humanity, in short, brought strikingly into play—these thoughts and memories, blending with the full inspiring awe and interest of the scene itself, lend it a pervading fervour and a deepened charm, and invest it with a sublime poetry that wears its intense beauty not more in the grand reality of the breathing picture, than in the visions and aspirations of the gazer's mind. The subject, too, possesses an universality, for the history of the death of Charles is one familiar to the ear of the world. It was a life-sacrifice extorted by the rage of a people, and given by its victim without shame or fear. Charles was, indeed, perhaps more a King upon the scaffold than in any other contingency of his disturbed unpeaceful life. His countenance was described by the poets and historians of that and after times as wearing a look of resignation most dignified and serene:—

No storm is in his human heart,  
No strife upon his brow,  
Where calmness, like a patient child,  
Sits almost smiling now!  
Seems the meek Monarch, as like one  
Whose gentle spirit sings  
Its song of solace to the soul  
Before it spreads its wings!  
And filling, ere it takes its flight,  
His features with a holy light!

Yet that serenest heavenly look  
Wears well its taint of earth;  
And mortal majesty retains  
The impress of its birth!  
The lion doth not hang his mane,  
The eagle droop his wing;  
The lofty glance, the regal mein,  
Fall only with the King;  
And Charles's calm, unquailing eye  
Shames all who thought he feared to die!

These last lines would seem to be derived from a sentence of D'Israeli's, with reference to the undignified assertions, then made by certain traitors, impugning the courage of their Monarch, "These mean spirits," says the eloquent writer "had flattered themselves that he who had been cradled in royalty—who had lived years in the fields of honour—and was now, they presumed, a recreant in imprisonment—'the grand delinquent of England,' as they called him—would start in horror at the block. This last triumph, at least, was not reserved for them; it was for the King." The triumph depicted here, however, is loftier than that of mere human exultation, which both poet and historian imply; it is the high, pure, simple, truth of virtue—mild in the eye, bland upon the brow, gentle in the utterance; it is the triumph of the good spirit pouring forth, to a world it would console rather than rebuke, its parting consciousness of peace: "*I go from a corruptible to an incorruptible crown, where no disturbance can have place.*" These holy words convey the whole strength and meaning of the Monarch's attitude and features.

The immediate act of the execution has thus been forcibly described:—"Men could discover in the King no indecent haste or flurry of spirits—no trembling of limbs—no disorder of speech—no start of horror. The blow was struck. An universal groan, as it were—a supernatural voice—the like never before heard, broke forth from the dense and countless multitude. All near the scaffold pressed forward to gratify their opposite feelings by some memorial of his blood—the blood of a tyrant or a martyr! The troops immediately dispersed on all sides the mournful or the agitated people."

The following verse from a poem published on the subject, in the *Times Newspaper*, is a sort of paraphrase of Hume's account of the immediate consequences of Charles's execution.

A few brief moments and the martyr dies:  
Dies in that sweet serenity of soul!  
Then rush quick tears into the nation's eyes  
Over all hearts Grief's sudden waters roll,  
And Sorrow raves and sobs without control!  
Now brave men's spirits are bow'd down to earth,  
Slander is hushed, and vengeance droops her wing,  
And women give their babes untimely birth.  
Shock'd at the murder of their honoured King!  
And misery flings her mourning over mirth,  
And fame (too late) is loud with the lost Monarch's worth.

\* See Hume.

## JANUARY.

As the words Natural History are generally associated with ideas of flowers, birds, and insects, the subject appears particularly barren in January, when the ground is usually hard with frost, or covered with snow, and scarcely any birds or insects can be seen. Yet even at this dreary and desolate season there is much to interest the lover of nature.

Frost itself presents many curious phenomena. When the temperature of the atmosphere sinks below the freezing point, ponds, and other pieces of still water, have their surface gradually changed into a thin coating of ice, and the aqueous particles on the surface of the earth are congealed and hardened in the same manner. The surface of the water being frozen, imparts its cold to the layer of water beneath, which also freezes, and in its turn freezes a layer beneath it, till in time the ice becomes thick enough to bear enormous weights. A similar operation goes on in the ground; but as the layers freeze more slowly, the frost seldom penetrates more than six inches deep into the earth in any part of Great Britain; and even in the hardest frosts, the earth below the part which is frozen is as warm as in summer, or about 58°. When frost kills plants it is by freezing their sap, which, of course, expands when frozen, and thus requiring more space than it had before, tears asunder the veins which contained it.

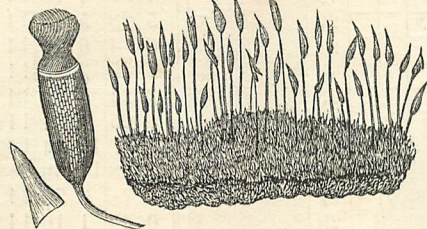
Hoar frost is merely frozen dew. On calm clear nights a great radiation of heat takes place from the surface of the earth, and the earth becoming suddenly chilled, communicates its coldness to those strata of the atmosphere which lie nearest to the ground, and these being laden with vapour, the moisture they contain is condensed by the sudden depression of the temperature, and falls in the shape of dew, covering the earth and trees with drops of moisture. In the summer these drops evaporate in the heat of the sun, but in frosty weather they become frozen into a covering of crystal.

It was formerly believed that the 14th of January was the coldest day in the year; that the sun always shone on the 22nd; and that if St. Paul's day (the 25th) should be fine, the year would be a productive one:—

If St. Paul's day be fair and clear,  
It doth betide a happy year;  
But if by chance it turn should rain,  
It will make dear all kinds of grain;  
And if the clouds make dark the sky  
Then neat and fowls that year shall die;  
If blustering winds do blow aloft  
Then wars shall trouble the realm full oft.

Snow is produced when the atmospheric temperature falls suddenly below the freezing point, at a time when the clouds are loaded with moisture. This moisture is congealed as it falls, and if the atmospheric temperature continue below the freezing point till the frozen particles reach the earth, they take the form of snow; but should the atmosphere be warmer near the surface of the earth than it was in the region of the clouds, the frozen particles melt as they descend, and reach the ground in the shape of sleet. Hail, on the contrary, is formed by the atmosphere near the surface of the earth being colder than that of the clouds, so that the aqueous particles, which leave the clouds in the shape of rain, become frozen into hail before they reach the earth. In this way hail often happens after rain has fallen violently in very hot weather; for, as heat ascends, the atmosphere remains excessively hot after the surface of the ground has been cooled by the rapidly descending rain, and consequently the rain drops are chilled and frozen as they approach the earth. As a curious illustration of the theory explaining the formation of snow, Dr. Robertson mentions that one severe winter, a pane of glass having been accidentally broken in an assembly-room at St. Petersburg, the stream of cold air which was admitted instantly congealed the vapour in the room, which fell in a shower of snow.

There are very few plants in flower at this season. The holly, the mistletoe, and the ivy will probably have some berries left, and a few golden blossoms may yet be found on the dwarf furze (*Ulex minor*), but these are only lingering remnants of the former year. The common groundsel and purple dead nettle or red archangel, are, however, generally in flower; and several of the mosses and lichens are in their greatest beauty. One of the latter, which is generally found on old palings, the yellow tremella, is sometimes called St. Gudul's lamp, because it first appears about St. Gudule's day (January the 8th), and because its shining, yellow, jelly-like substance, glitters and quivers in the sun like the light of a feeble lamp. The common, or wall screw-moss (*Tortula muralis*) generally



SCREW MOSS.

ripens its seeds in this month. This moss, which grows almost everywhere, on old walls and other brickwork, and what at other seasons looks like patches of dark green velvet, if now examined closely, will be found to have springing from its base numerous very slender stems, each of which terminates in a dark brown case, which is, in fact, its fruit. As the fruit ripens, a little cap which covers it, like an extinguisher, rises gradually and is at last thrown off; and when the lid of the fruit, which is also conical, falls off, a curious tuft of twisted hairs appears, forming a kind of fringe, and it is from these twisted hairs that the plant takes its popular name of screw-moss. If a patch of the moss is gathered when in this state, and the green part at the base is put into water, the threads of the fringe will uncoil and disentangle themselves in a most curious and beautiful manner, and thus afford an opening to the seeds, which are exceedingly small, and are contained within a thin bag, attached to the central column of the case. It may here be mentioned that all mosses and lichens are more easily detached from the rocks and walls on which they grow in frosty weather than at any other season, and consequently they are best studied in winter. Many of them, also, are in fruit at this season.

About the 21st of January (St. Agnes's day), the Christmas rose, or black hellebore comes into flower, and hence the plant was formerly dedicated to St. Agnes, and numerous virtues were assigned to it, in addition to those which it really possesses. The flower of this plant is large and handsome, like a single blush rose; and the root, which is thick and fleshy, looks quite black, when first taken out of the ground; but this dark colour is only in the outer skin, which readily peels off, and leaves a white and succulent substance, which is the part

used in medicine. The bear's foot, or stinking hellebore, also produces its curious purplish flowers about this season:

Its petals green, o'erlapped and closed,  
Present each arch'd converging lip,  
Embroidered with a purple tip,  
And green its floral leaves expand,  
With fingers like a mermaid's hand. MANT.

Towards the close of the month the Winter aconite frequently unfolds its bright yellow flowers, placed, as it were, in a salver of green; and about the 27th of January the first snow drop is frequently seen, attended by what is called the Scotch crocus, the flowers of which are white, regularly streaked with very dark blackish purple.

The robin redbreast and the common wren are among the few birds that sing in January; but they are said to suspend their music when the frost is very hard and has continued some time. It is at this season that the beautiful red breast of the robin has its most brilliant hue. In spring the red feathers lose their lustre, and the bird having a mottled breast all summer can scarcely be distinguished from the redstart, till its autumnal moult, when it recovers its characteristic feathers. Young redbreasts, hatched in the spring, do not display any scarlet feathers on the breast till after they have moulted in the following autumn.

High is his perch, but humble is his home,  
And well conceal'd, sometimes within the sound  
Of heartsome milk-luck, where the spacious door  
White-dusted, tells him plenty reigns around;  
Close at the root of briar-bush, that o'erhangs  
The narrow stream, with shagbarks bedded white,  
He fixes his abode and lives at will.  
Of near some single cottage he prefers  
To rear his little home; there, pert and spruce,  
He shares the refuse of the goodwife's churn,  
Nor seldom does he neighbour the low roof  
Where tiny elves are taught. GRAHAM.

Starlings are seen in great numbers in the month of January. It is supposed by many naturalists that they stay in Great Britain all the year, and that they only migrate to the south in winter, returning northward in spring. Their food is chiefly insects, but when these cannot be obtained they will eat grain. The flight of the starling is not undulated, and it walks or runs on the ground like the wagtails and the larks, but never hops like the thrush. In severe winters starlings are sometimes found in pigeon-houses, where it is supposed they have ventured to protect themselves from the cold. The golden-crested wren is frequently seen in January. It is the smallest of the British birds. Its weight seldom exceeds eighty grains, and its length is rarely more than three inches. The male has a beautiful orange crest, but the crest of the female is much smaller and less conspicuous. This little bird remains uninjured during the severest weather, and it is said to sing even when the snow is falling. Its nest, which is very small, is composed of green moss, and it is said to have the opening on one side. The eggs are scarcely larger than peas, and they are white, with a tinge of pink. It is a singular fact in the history of this bird that eggs are frequently found that appear to have been laid the previous season, but never set upon. Sparrows are found abundantly at this season, as they are at every other; and fieldfares, larks, and redwings, are frequently seen on the banks of rivers searching for insects, which are sometimes found in such places, even upon the snow.

Insects are generally torpid in this month. Caterpillars, grubs, and maggots are sometimes found in the pupa state, but they are generally either buried in the ground or hidden in some secluded place, where it is only by chance they can be discovered. The eggs of insects may, however, be found in great abundance, though they are generally so carefully concealed as only to be recognised by a naturalist. The twigs of several kinds of trees will be found to have rings of what look like beads upon them, but which are, in fact, the eggs of the lackey moth glued so firmly together that they cannot be separated without the aid of a penknife. The eggs of the gipsy moth are covered with little tufts of down; and those of the vapourer are found on the outside of the web-like bag which served the female for her cocoon. Snails shut themselves up for the winter by means of what is called an operculum, which is a shell-like substance just large enough to fill the opening of the shell, to which the snail glues it with a strong cement, having previously fixed herself to a wall or tree by a portion of the same glutinous substance, and in this state she remains without either air or food till recalled to life by the warmth and moisture of spring. In the countries where snails are eaten, they are only used while in this state of hybernation. They are fattened in what are called snail gardens, that is, in broad shallow pits sunk in the ground. In these the snails are kept and fed with fresh leaves, bran, and potatoes, during the summer, and in the winter, when they fix themselves against the walls of the pits, they are collected, packed in casks, and sent to market. It is said that four millions of snails are exported every year from the city of Ulm alone, and yet there are snail gardens in various other parts of Germany. The common garden snail (*Helix aspersa*) is never eaten, and it is only the large apple snail (*Helix Pomatia*) which is used as food. This large snail is not common in England, but it is found at Dorking and in some other places.



EGGS OF THE LACKEY MOTH.



MOOR SNAIL AND MOUNTAIN BULIMUS.

There is a kind of snail (*Helix virgata*), common in Devonshire, at this season, which is so small as to be generally found sticking to the blades of grass, together with a species of *Bulimus*; and these molluscous animals being eaten by the sheep with the grass, are said to afford a most fattening nourishment, and to make the mutton remarkably sweet. Many persons who are not observers of nature are not aware how many different kinds of snail are to be found, even in Great Britain. In different parts of the world there are two hundred and fifty living species known and described, and sixteen fossil kinds. Some of the foreign living kinds are very beautiful, their shells being spotted with various brilliant colours. Even among the common garden snails some are pink or yellowish, and others curiously banded. The banded snail (*Helix nemoralis*) differs from all the other kinds in living principally upon earth-worms, or bits of meat. This was discovered accidentally by a little girl, the daughter of an eminent naturalist, who having picked up one of these pretty snails, and tried to feed it with various kinds of leaves without effect, at last gave it a piece of meat from her own dinner, which, to her delight, it ate greedily; by a series of further experiments it was found that this snail is really carnivorous.



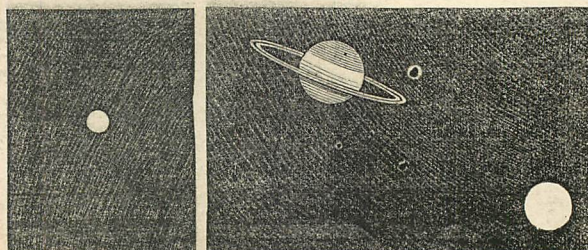
NATIONAL SPORT, SCOTLAND—  
OTTER HUNT

M	D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER AT LONDON BRIDGE			EQUA- TION OF TIME.		
			Rises.	Sets.	DECLINA- TION SOUTH.	Rises Afternoon	SOUTH. Morning	Sets. Morning.	Before Sunrise. O'Clock.	After Sunset. O'Clock.	Moon's Age.	Morning. 6h. 8h. 10h.	Morning. 6h. 8h. 10h.	Afternoon	Add.	Day of the Year.	
1	M	Hilary Term ends—Pheasant & Partridge Shooting ends	7 41	4 47	17 11	6 29	0 38	7 39			15			2 52	3 9	13 51	32
2	Tu	<i>Candlemas Day</i>	7 40	4 49	16 54	7 32	1 21	8 4			16			3 25	3 41	13 59	33
3	W	<i>St. Blaise</i>	7 38	4 50	16 37	8 34	2 4	8 26			17			3 56	4 12	14 6	34
4	Th	Aldebaran Souths 7h. 30m. P.M.	7 36	4 52	16 19	9 36	2 46	8 48			18			4 25	4 45	14 12	35
5	F	Sir R. Peel b. 1788	7 34	4 54	16 1	10 39	3 28	9 11			19			4 59	4 13	14 17	36
6	S	<i>St. Agatha's Day</i>	7 32	4 56	15 43	11 43	4 11	9 34			20			5 28	5 46	14 21	37
7	S	<b>SEXAGESIMA SUN.</b>	7 30	4 57	15 24	Morning.	4 56	10 1			21			6 4	6 21	14 25	38
8	M	Half Quarter	7 29	4 59	15 5	0 47	5 42	10 31			22			6 40	7 0	14 28	39
9	Tu	Sirius Souths at 9h. 20m. P.M., 22 deg. high	7 27	5 0	14 46	1 51	6 32	11 7			23			7 24	7 52	14 30	40
10	W	Q. Victoria m. 1840	7 25	5 2	14 27	2 53	7 24	11 52			24			8 25	9 4	14 31	41
11	Th	The Sun Rises E.S.E. and sets W.S.W.	7 24	5 4	14 7	3 53	8 19	Afternoon			25			9 47	10 24	14 32	42
12	F	Capella Souths 7h. 36m. P.M.	7 22	5 6	13 48	4 46	9 16	1 49			26			11 8	11 48	14 31	43
13	S	Rigel Souths 7h. 34m. P.M.	7 20	5 8	13 28	5 33	10 14	3 1			27				0 22	14 30	44
14	S	<b>QUINQUAGESIMA,</b>	7 18	5 10	13 7	6 15	11 13	4 19			28			0 49	1 16	14 29	45
15	M	<i>SHROVE SUNDAY — St. Valentine</i>	7 16	5 12	12 47	6 50	Afternoon	5 42			29			1 41	2 4	14 26	46
16	Tu	Shrove Tuesday	7 14	5 14	12 26	7 23	1 7	7 4			1			2 27	2 52	14 23	47
17	W	Ash Wednesday	7 12	5 16	12 5	7 52	2 3	8 27			2			3 13	3 36	14 19	48
18	Th	Cambridge Term	7 10	5 18	11 44	8 23	2 58	9 47			3			3 57	4 20	14 14	49
19	F	divides Sun enters Pisces	7 9	5 20	11 23	8 53	3 52	11 3			4			4 41	5 3	14 9	50
20	S	α Orionis Souths, 7h. 34m. P.M.	7 7	5 21	11 2	9 26	4 45	Morning.			5			5 24	5 47	14 3	51
21	S	<b>QUADRAGESIMA,</b>	7 5	5 23	10 40	10 1	5 39	0 16			6			6 9	6 30	13 56	52
22	M	1st SUNDAY IN LENT	7 3	5 25	10 18	10 43	6 32	1 25			7			6 56	7 18	13 49	53
23	Tu	Sirius Souths 8h. 27m. P.M.	7 1	5 27	9 57	11 29	7 23	2 25			8			7 49	8 20	13 41	54
24	W	<i>St. Matthias</i>	6 59	5 29	9 34	Afternoon	8 14	3 17			9			9 3	9 45	13 32	55
25	Th	Castor Souths at 9h. 4m. P.M. 71 deg. high	6 56	5 30	9 12	1 18	9 3	4 2			10			10 26	11 9	13 23	56
26	F	Procyon Souths at 9h. 6m. P.M. 44 deg. high	6 54	5 32	8 50	2 8	9 50	4 42			11			11 49		13 13	57
27	S	Pollux Souths at 9h. 7m. P.M., 67 deg. high	6 52	5 34	8 28	3 19	10 35	5 13			12			0 24	0 50	13 2	58
28	S	<b>2ND SUN. IN LENT</b>	6 50	5 36	8 5	4 20	11 19	5 41			13			1 13	1 35	12 51	59

The presence or absence of the Light of the Moon is shown by the Light or dark spaces, referring to each hour of the night. This enables the reader, at one glance, to see what hours are light, and what dark, in any given night, without reference to the actual times of the Moon rising or setting. The quantity of moonlight is known by referring to the column separating the morning from the evening hours; the numbers in which show "the Moon's Age."

SATURN sets about  $3^{\circ}$  N. of the W.S.W. throughout the month. On the 1st day at 6h. 28m. P.M., being about 1h. 42m. after the Sun has set. The amount of

MERCURY ON THE 16TH.      APPEARANCE OF SATURN AND VENUS ON FEB. 7TH.



The scale on which the Planets are drawn, is 40 seconds to an inch.

TIMES OF THE SOUTHING, &c, OF THE PRINCIPAL FIXED STARS,  
WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Star's Names.	Magnitude.	Time of south- ing during the evening of the 1st day.		Height in degrees above the horizon. S (South) N (North)	Setting.	
		H.	M.		Number of hours from southing.	Point of the horizon.
Alpha Arietis	3	5	13	61 $\frac{1}{2}$ s	H. 8 $\frac{1}{2}$	N.W. by W.
Alpha Ceti	2	6	9	42s	6 $\frac{1}{2}$	Between W. and W. by N.
Alpha Persi	2	6	28	88s	Never Sets	
Aldebaran	1	7	42	55s	7 $\frac{1}{2}$	W.N.W.
Capella	1	8	20	84s	Never Sets	
Rigel	1	8	22	30s	5 $\frac{1}{2}$	Near W. by S.
Beta Tauri	2	8	31	67s	8 $\frac{3}{4}$	Near N.W.
Alpha Orionis	1	9	0	46s	6 $\frac{1}{2}$	W. by N.
Sirius	1	9	52	22s	4 $\frac{1}{2}$	Near W.S.W.
Castor	3	10	38	71s	9	Near N.W.
Procyon	1	10	45	44s	6 $\frac{1}{2}$	Near W. by N.
Pollux	2	10	50	67s	9	Near N.W.

POSITION OF THE CONSTELLATIONS RISING, ON THE MERIDIAN,  
AND SETTING ON THE 1st. DAY AT 10H. P.M.

Constellations Rising.	Constellations on the Meridian	Constellations Setting.
The legs of Hercules in N. by E. to N.N.E.	The body of Draco from 20° to 30° above the N. horizon	The neck of Cygnus, mid- way between N. by W. and N.N.W.
Corona Borealis in N.E.	Polaris	The hoofs of Pegasus near N.N.W.
The knees of Bōtīs in E.N.E.	The head of Camelopardalus, between Polaris and the Zenith	
The shoulders of Virgo in E. by N.	The head and neck of the Lynx near the Zenith	The N. wing of Pegasus N.W. by W.
	Gemini, 75° above S. horizon	The body of Cetus, W.S.W.
	Neck and chest of Monoceros, 38° above S. horizon	Columba, S. by W.
The Crater E.S.E.	Canis Major, 25° above S. horizon	

The constellations occupy the same positions on January 1st at midnight, and on March 1d. at 8h. P.M.

Days of the Month.	Length of Day, or number of hours between Sun- rise and Sunset.	Number of hours and minutes the day has in- creased since the Shortest Day.	Time of Day-break, or beginning of Twilight.	Time of Twilight ending.	JUPITER'S SATELLITES.				OCCULTATIONS OF STARS BY THE MOON.			
					Eclipses of				Names of the Stars.	Magni- tude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
					1st. Sat.		2nd. Sat.					
					Emersion.		Emersion.					
1	H. M.	H. M.	H. M.	H. M.	D. H. M.	D. H. M.	u Geminorum  k Geminorum	5	D. H. M.	Dark Bright		
6	9 6	1 21	5 43A.M	6 45PM	2 11 0 P. M.	1 8 18 P. M.			24 9 46 P. M.			
11	9 24	1 39	5 37 "	6 51 "	10 0 56 A. M.	8 10 54 P. M.			10 46 P. M.			
16	9 40	1 55	5 29 "	6 69 "	11 7 25 P. M.	16 1 30 A. M.						
21	10 0	2 15	5 20 "	7 8 "	18 9 21 P. M.				25 9 39 P. M.		Dark Bright	
26	10 18	2 33	5 11 "	7 17 "	25 11 17 P. M.	3rd. Sat.		10 51 P. M.				
28	10 38	2 53	5 1 "	7 25 "								
23	10 46	3 1	4 56 "	7 10 "		22 8 5 P. M.						

February 1d. after 8 $\frac{1}{2}$ h. P.M. the four Satellites of Jupiter are E., and they are W. of the Planet on the 21st. day at 8h. P.M., and for some time afterwards.

TIMES OF CHANGES OF THE MOON,  
And when she is at her greatest distance  
(Apogee), or at her least distance (Peri-  
gee), from the Earth in each Lunation.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Peri- gee), from the Earth in each Lunation.			Days of the Month.	RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.											
				MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.	
				Right Ascension	Declina- tion South.	Right Ascension	Declina- tion South.	Right Ascension	Declina- tion South.	Right Ascension	Declina- tion North.	Right Ascension	Declina- tion South.	Right Ascension	Declina- tion North.
LAST QUARTER ..	8D. 1. 39M. P.M.	1	20h.16m	21° 37'	21h.45m	15° 7'	17h.32m	23° 28'	4h.19m	20° 53'	22h.14m.	12° 34'	0h.42m	3° 48'	
NEW MOON ..	15 11 26 A.M.	6	20 51	19 37	22 9	13 0	17 48	23 39	4 20	20 55	22 16	12 29	0 43	3 53	
FIRST QUARTER ..	22 3 59 A.M.	11	21 25	17 21	22 33	10 44	18 3	23 45	4 20	20 58	22 18	12 9	0 43	3 58	
APOGEE ..	3 9 A.M.	16	22 0	14 19	22 56	8 20	18 18	23 46	4 21	21 1	22 20	11 56	0 44	4 3	
PERIGEE ..	16 1 A.M.	21	22 35	10 41	23 19	5 52	18 34	23 40	4 22	21 5	22 23	11 43	0 45	4 8	
		26	23 10	6 33	23 42	3 19	18 49	23 30	4 24	21 10	22 25	11 30	0 46	4 14	

## February Anniversary.



ESCAPE OF MARY QUEEN OF SCOTS FROM LOCHLEVEN CASTLE.

## DEATH OF MARY QUEEN OF SCOTS.

FEBRUARY 8, 1587, Mary was beheaded for alleged conspiracy, in Fotheringhay Castle, in the 45th year of her age.

Every phase in the life of this ill-fated sovereign is regarded with interest, and her entire career would seem to belong to the romance of history. Neither of its strange events, however, surpasses the escape of the imprisoned Queen from the Castle of Lochleven, an ancient fortress situate on a small island at the north-west end of the lake, in Kinross-shire, Scotland. It was once the property of the Douglasses of Lochleven, but is now a heap of ruins. Thence Mary escaped on the 2nd of May, 1568.

It appears that the marriage of Queen Mary with Bothwell raised the public indignation to such a pitch, that the nobles rose against them, and they fled before an armed and indignant people from fortress to fortress. At length, after they had collected some followers, a pitched battle near Carberry Hill was about to ensue, when Mary abandoned Bothwell, and threw herself on the mercy of her subjects. They conducted her first to Edinburgh, where, as she still persisted in regarding Bothwell as her husband, the nobles resolved that she should be confined during her life in the fortress of Lochleven. She was in a paroxysm of distress when Lords Ruthven and Lindsey arrived at the Palace of Holyrood to inform her that they were commanded to put in execution the order for her commitment. They charged her women to take from her all her ornaments and royal attire; and, being clothed in a mean dress, she was conveyed to the prison appointed for her. The Lords Seton, Yester, and Borthwick endeavoured to rescue her, but failed in the attempt. She was delivered over to William Douglas, the Governor of the Castle of Lochleven, who was nearly related to the Regent Morton. Here, however, Mary continued a prisoner less than twelve months, when she effected her escape by the aid of the Governor's brother, George Douglas, who had become enamoured of her. On May 2, in the year above named, when her keeper was at supper with his family, George Douglas having possessed himself of the keys of the Castle, hastened to the Queen's apartment, and conducted her out of prison. Having locked the Castle gates, they entered a boat which awaited them, and being rowed across the lake, the Lord Seton received the Queen with a chosen band of horsemen in complete armour. That night he conveyed her to his house of Niddrie, in West Lothian; having rested there a few hours, she set out for Hamilton, and was soon at the head of a gallant army.

Mary Stuart, famous for her beauty, her wit, her learning, and her misfortunes, was daughter of James V., King of Scotland, and succeeded her father in 1542, eight days after her birth. In 1558 she married François, dauphin, and afterwards King of France, by which means she became Queen of France. This monarch dying in 1560, she returned into Scotland, and married her cousin, Henry Stuart, Lord Darnley, in 1565. Being excluded from any share of the Government (as he suspected) by the advice of Rizzio, an Italian musician, her favourite and secretary, the King, by the counsel and assistance of some of the principal nobility, suddenly surprised them together, and Rizzio was slain, in the Queen's presence, in 1566. An apparent reconciliation afterwards took place, when Darnley, who had continued to reside separately from the Queen, was assassinated, and the house he had inhabited was blown up with gunpowder, in February, 1567. This barbarous transaction was but very imperfectly investigated; and in the month of May following, she wedded the Earl of Bothwell, who was openly accused as the murderer of the late King. Scotland soon became a scene of confusion and civil discord. Bothwell, took refuge in Denmark; and Mary, made a captive, was treated with insult and contempt. After some months' confinement she effected her escape, and, assisted by the few friends who still remained attached to her, made an effort for the recovery of her power. She was opposed by the Earl of Murray, the natural son of James V., who had obtained the Regency in the minority of her son. The battle of Langside ensured the triumph of her enemies; and, to avoid again falling into their power, she fled to England, and sought the protection of Queen Elizabeth; but that Princess treated her as a personal and political rival, and kept her in safe custody for a period of eighteen years. And during the whole of that long term she was considered as the head of the Popish party, who wished to see a Princess of their persuasion on the throne of England. Mary, despairing of recovering that of Scotland, most assuredly became a dupe to this party, and countenanced, if she was not directly concerned in, their plots. She was accordingly tried for a conspiracy against the life of the Queen of England, condemned, and suffered decapitation. Her body was interred with great pomp, in Peterborough Cathedral, but subsequently removed by her son, James I, to Henry the Seventh's Chapel, Westminster-Abbey, where a magnificent monument was erected to her memory. The character and conduct of Mary, Queen of Scots, have been made the subject of much controversy; but the fact of her marrying Bothwell, "stained as he was by universal suspicion of Darnley's murder, is a spot upon her character for which we in vain seek an apology."

## FEBRUARY.

FEBRUARY is generally considered the first month of the spring. As the snow melts gradually away, snowdrops appear abundantly, and hence this delicate little flower was formerly called the fair maid of February. It was also called our lady of February, as it was generally in flower on the 2nd of the month, the festival of the Purification of the Virgin, or Candlemas Day. This day, in many parts of Great Britain, particularly in Scotland, is supposed to have great effect upon the weather.

If Candlemas Day be fair and bright,  
Winter will have another flight;  
But if Candlemas Day be clouds and rain,  
Winter is gone, and won't come again.

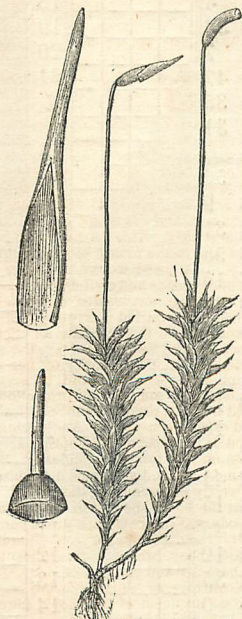
Towards the middle of February the cloth-of-gold crocus appears, with its petals of a deep golden yellow, which are striped with very dark reddish brown on the outside. The bulb, or rather corm, of this species is very large, and covered with strongly-marked network. The leaves of various bulbous plants now begin to appear above the ground, and the pink hepatica and the mezeoreon are generally in flower. Both flowers are worth remarking; the hepatica because its flowers are of as dark and rich a colour in the bud as they are when they are fully expanded; and the mezeoreon because the petals of its flowers are each furnished with a lining, which may be carefully peeled off, and which, when separated, looks as if two flowers had been glued together. The flowers of the latter plant appear clustered together on the naked part of the branches, while the leaves, when they unfold, are produced in tufts at their points. The bark of the mezeoreon is extremely tough, and the inner bark is capable of being distended, so as to form a kind of lace. The curious lace-bark tree of Jamaica is nearly allied to the mezeoreon, but its bark is still more beautiful, and is, indeed, so fine, that ruffles, a frill, and a cravat were cut from it and worn by Charles II. The catkins of the hazel generally appear in this month, though the female flowers, which are of a bright crimson, are seldom seen before March. The buds of the different kinds of trees begin to swell at this season, and it is curious to mark how diversified they are in appearance; some being short and thick, like those of the horse-chestnut and the lilac; and others long and tapering, like those of the *Eunonymus*, or spindle tree. On the 22nd of the month (St. Margaret's Day), the daisy is generally in flower, and hence the plant was formerly called Herb Margaret. It is still called *La Marguerite* in France, though it is also sometimes called *La Paquerette* in that country, from its being most abundant about Easter, the French word for which is *paques*. The name of daisy is said to have been, originally, day's eye. The green hellebore, which dies down to the ground in winter, springs up again in February, and flowers almost as soon as it appears above ground. The creeping crowsfoot is often in flower at this season. In ancient times, the holly and mistletoe used to deck the houses at Christmas, were suffered to remain till the 1st of February, when they were removed, and their place supplied with box.

The curious cupped moss, called the Jew's-ear, is very abundant about this period. Though it is called a moss, it is, in fact, a kind of fungus which grows on old wood, generally the trunks of elder trees, which are partially decayed. There are two kinds, one of which is of a reddish brown, and the other a dingy black. The crab's-eye lichen (*Lecanora parella*) is found at this season on exposed rocks and stones, and sometimes on walls and stones by the sea-side. The thallus, or leafy part, is of a dirty white, and forms conspicuous roundish patches, closely adhering to the stones on which they grow. It is used for dyeing crimson or purple in the south of France. Cudbear (*L. tartarea*), is another crustaceous lichen, very similar to the last in form, but differing both in size and colour, being larger, and of a brownish hue. In the Highlands of Scotland, many peasants earn fourteen shillings per week by scraping this lichen off the rocks with an iron hoop, and sending it to the Glasgow market, where it is used for dyeing wool purple. The scale mosses (*Jungermannie*), and the hair moss (*Polytrichum*) are both in fructification about this period. One of the commonest kinds of scale moss (*Jungermannia bidentata*) is found in fructification at this season; it grows in patches, in moist shady situations,



SCALE MOSS.

near the roots of trees, and among moss upon commons, and on hedge banks. The seed vessels are little oval bodies, which, if gathered when unexpanded, and brought into a warm room, burst under the eye with violence the moment a drop of water is applied to them, the valves of the vessel taking the shape of a cross, and the seeds distending in a cloud of brown dust. If this dust be examined in a microscope, a number of curious little chains, looking something like the spring of a watch, will be found among it, their use being to scatter the seeds; and if the seed-vessel be examined in a microscope while in the act of bursting, these little springs will be found twisting and writhing about like a nest of serpents. The undulated hair moss (*Polytrichum undulatum*) is found on moist shady banks, and in woods and thickets. The seed-vessel has a curious shaggy cap, but in its construction it is very similar to that of the screw moss, except that the fringe round its opening is not twisted. There are also several kinds of tremella found on partially decayed wood at this season; and several curious fungi, which appear sometimes in patches of white or yellowish matter, and sometimes of a brilliant blue or purple. The curious plant called the ground *Sphaerocarpos* is only found at this season growing on the ground in clover and turnip fields, generally in Norfolk and Suffolk. It consists of a number of pear-

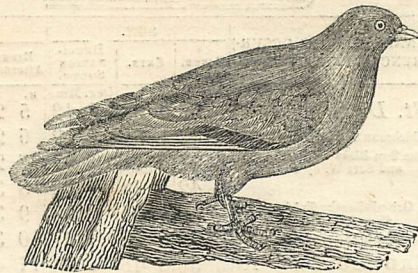


UNDULATED HAIR MOSS.

shaped substances, growing in clusters on a very thin membranous leaf. The whole plant is of a bright yellowish green; and, when the pear-like bodies are opened, a round ball is found at the base of each.

Many birds pair in February; but the earliest are generally the rooks, which sometimes begin to build on Candlemas Day (Feb. 2nd). The ravens are nearly as early; and White of Selborne relates an interesting anecdote of a female raven, which happened in this month. "In the centre of a grove near Selborne, there stood an oak, which, though shapely and tall on the whole, bulged out into a large excrescence about the middle of the stem. On this a pair of ravens had fixed their residence for such a series of years, that the oak was distinguished by the title of the Raven Tree. Many were the attempts of the neighbouring youths to get at this eyrie: the difficulty whetted their inclinations, and each was ambitious of surmounting the arduous task. But when they arrived at the swelling, it juttied out so in their way, and was so far beyond their grasp, that the most daring lads were awed, and acknowledged the undertaking to be too hazardous. So the ravens built on, nest upon nest, in perfect security, till the fatal day arrived in which the wood was to be levelled. The saw was applied to the butt, the wedges were inserted into the opening, the woods echoed to the heavy blows of the beetle or mallet, the tree nodded to its fall; but still the dam sat on. At last, when it gave way, the bird was flung from her nest; and, though her parental affection deserved a better fate, was whipped down by the twigs, which brought her dead to the ground."

The blue titmouse, or tomtit, may be seen busily at work in the month of February pecking off the trees all those buds which are infested with insects, as the bird is one of those which require animal food; and, in severe frosts, it may often be seen near dwellings searching for bits of meat or bones which may have been thrown out by the cook. The nuthatch and the woodpecker are birds having similar habits, and they may often be seen in February pecking insects out of the lichens, with which the branches are covered. Blackbirds frequently begin to build in this month; and towards its close are heard the songs of thrushes, woodlarks, sparrows, wrens, and many other birds. In marshy places, the two harsh sharp notes of the marsh titmouse are heard about this season; and the stone curlews are heard to pipe. They are supposed to be the first migrating birds that return in spring. The bullfinch is frequently seen very busily employed in pecking at the swelling buds of the early trees and shrubs. "The bullfinch," says Mr. Knapp, "is gifted with no voice to charm us; it communicates no harmony to the grove: all we hear from it is a low and plaintive call to its fellows in the hedge. It has no familiarity or association with us, but lives in retirement in some lonely thicket ten months in the year. At length, as spring approaches, it will visit our gardens, an insidious plunderer. Its delight is in the embryo blossoms wrapped up at this season in the bud of a tree: and it is very dainty and curious in its choice of this food, seldom feeding upon two kinds at the same time. It generally commences with the germs of our larger and most early gooseberries; and the bright red breasts of four or five cock birds, quietly feeding on the leafless bush, are a very pretty sight, but the consequences are ruinous to the crop. When the cherry buds begin to come forward, the bullfinch quits the gooseberry bushes, and makes tremendous havoc with the cherry trees. The Orleans and green-gage plums form the next treat, and draw the bullfinch's attention from what remains of the cherry. Having banquetted here awhile, it leaves our gardens entirely, resorting to the fields and hedges, where the sloe bush in April furnishes it with food. May brings other dainties and other avocations."



THE WOOD PIGEON.

Wood pigeons are frequently seen towards the close of this month. The wood pigeon is indigenous to this country, and it is doubtful whether it migrates farther than from the northern to the southern parts. These birds assemble in large flocks in winter; and they resort to the woods, in order to roost in the highest trees, preferring those of the ash. They begin to pair generally in the month of February, "at which time the male birds are seen flying in a singular manner, alternately rising and falling in the air." The nest of the wood pigeon is formed of a few small sticks, so loosely put together, that the eggs may frequently be seen through them. The female lays only two, and they are white and oval; but larger than those of the common pigeon. Both the male and female birds assist in making the nest; and the male sometimes relieves the female in sitting. The nest is frequently built in pine or fir trees; but it is also found in hedges, or in large hawthorn bushes. The most common situation is, however, in ivy, or in the fork of a large tree.

Various kinds of caterpillars are found in the month of February; as, by a curious and beautiful provision of nature, insects come into existence just at the moment when the leaves of plants unfold so as to afford them food. Butterflies, that appear to have found some place of shelter all the winter, often appear on a warm day in February, fluttering about, and laying their eggs on the leaves of the plants destined to afford food to their caterpillars, before the leaves themselves are quite expanded; and in this way the eggs of the nettle, peacock, and painted lady butterflies, and sometimes even these of the tiger moth, are found on the young leaves of the nettle when the plants are only a few inches high. A few of the common flies sometimes appear at the end of this month; and the bat begins to fly. The woodlouse (*Oniscus asellus*) often makes its appearance towards the close of this month. This creature belongs to the Crustaceae, and it possesses the same power of curling up its body as the lobster does its tail. Woodlice always frequent dark and retired places; they are generally found under stones, or old logs of wood; and if a flower-pot chances to be turned down it is sure to be soon filled with woodlice. The food of these creatures consists of decayed vegetable and animal substances, and they are very fond of burying themselves in fruit somewhat over ripe. They generally crawl about at night, and are rarely seen in the day-time excepting in wet weather; and they coil themselves up when in danger. The young, when first hatched, are nearly white, and have only twelve feet; though, when the creature is full grown, it is brown, and has fourteen feet.



NATIONAL SPORT, IRELAND—  
FOX HUNT.

M D	W D	ANNIVERSARIES, OCCU- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER AT LONDON BRIDGE		EQUA- TION OF TIME.	Day of the Year.
			Rises.	Sets.	DECLI- NATION SOUTH.	Rises. Afternoon	SOUTH.	Sets. Morning	Before Sunrise. O'Clock 2h. 4h. 5h.	Moons Age.	After Sunset. O'Clock 7h. 8h. 10h.	Morning.	Afternoon		
1	M	<i>St. David</i>	6 48 5 38	7 42	5 23	Morning.	6 7			13		1 55	2 14	12 40	60
2	Tu	Aldebaran Souths 5h. 47m. P.M.	6 46 5 39	7 19	6 25	0 2	6 31			14		2 30	2 46	12 28	61
3	W	The Sun Rises in the E. by S. and Sets W. by S.	6 44 5 41	6 57	7 29	0 45	6 54			15		3 3	3 18	12 15	62
4	Th		6 42 5 43	6 34	8 31	1 27	7 17			16		3 32	3 46	12 2	63
5	F	Orion's Souths 6h. 56m. P.M., 46 deg. high	6 40 5 44	6 10	9 34	2 10	7 40			17		4 0	4 17	11 48	64
6	S	Sirius souths 7h. 43m. P.M.	6 38 5 46	5 47	10 38	2 53	8 4			18		4 32	4 45	11 34	65
7	S	3RD SUNDAY IN LENT	6 36 5 48	5 24	11 40	3 39	8 34			19		5 0	5 16	11 20	66
8	M		6 33 5 50	5 1	Morning.	4 26	9 7			20		5 33	5 48	11 5	67
9	Tu	Pollux souths 8h. 29m. P.M.	6 31 5 51	4 37	0 42	5 16	9 47			21		6 10	6 29	10 50	68
10	W	Regulus Souths 10h. 47m. P.M. 51 deg. high	6 28 5 53	4 15	1 41	6 8	10 35			22		6 54	7 17	10 35	69
11	Th	Mercury sets 7h. 43m. P.M.	6 26 5 55	3 50	2 35	7 2	11 31			23		7 49	8 26	10 19	70
12	F	<i>St. Gregory</i>	6 24 5 57	3 27	3 23	7 58	Afternoon			24		9 8	9 52	10 3	71
13	S	Venus sets 7h. 54m. P.M.	6 21 5 59	3 3	4 7	8 55	1 50			25		10 35	11 18	9 46	72
14	S	4TH SUNDAY IN LENT	6 18 6 0	2 40	4 44	9 51	3 9			26		11 55		9 30	73
15	M		6 16 6 2	2 16	5 17	10 48	4 31			27		0 26	0 54	9 13	74
16	Tu	Mars rises 4h. 10m. A.M.	6 13 6 4	1 52	5 48	11 44	5 53			28		1 19	1 43	8 56	75
17	W	<i>St. Patrick</i>	6 11 6 6	1 28	6 18		7 15			1		2 8	2 28	8 38	76
18	Th	Mercury sets at 7h. 54m. P.M., 3 deg. N. of W. by N.	6 9 6 8	1 5	6 49	1 36	8 37			2		2 51	3 13	8 21	77
19	F		6 7 6 9	0 41	7 22	2 32	9 54			3		3 35	3 57	8 3	78
20	S	The Sun rises nearly E. and sets W.	6 5 6 11	0 17	7 58	3 28	11 7			4		4 19	4 40	7 45	79
21	S	5TH SUNDAY IN LENT— <i>St. Benedict</i> —Ver- nal Equinox—Spring com.	6 3 6 12	North	8 38	4 23	Morning			5		5 0	5 20	7 27	80
22	M		6 1 6 14	0 30	9 24	5 17	0 13			6		5 45	6 6	7 9	81
23	Tu	Sirius Souths 6h. 35m. P.M., 22 deg. high	5 59 6 15	0 54	10 16	6 9	1 10			7		6 30	6 55	6 51	82
24	W	Sun in Aries	5 57 6 17	1 17	11 11	6 59	2 0			8		7 20	7 50	6 32	83
25	Th	<i>Annunciation</i>	5 54 6 18	1 41	Afternoon	7 47	2 41			9		8 29	9 10	6 14	84
26	F	Camb. Term ends	5 52 6 20	2 4	1 11	8 33	3 15			10		9 53	10 34	5 55	85
27	S	Oxford Term ends	5 50 6 22	2 28	2 14	9 18	3 45			11		11 15	11 48	5 37	86
28	S	PALM SUNDAY— 1st Day in Passion Week	5 47 6 24	2 51	3 14	10 1	4 12			12			0 22	5 18	87
29	M		5 45 6 26	3 15	4 17	10 43	4 35			13		0 45	1 7	4 59	88
30	Tu	Castor souths at 6h. 54m. P.M.	5 43 6 28	3 38	5 19	11 25	5 0			14		1 27	1 44	4 41	89
31	W	Procyon Souths 6h. 57m. P.M., 44 deg. high	5 41 6 30	4 1	6 22	After Midnight.	5 20			15		1 59	2 15	4 22	90

## MARCH.

THE MOON from the 1st to the 7th, rises during the evenings. On the 1st. she is in Sextans. On the 2nd, she is full at 9 minutes after 3 in the morning, but, without an eclipse, as she is then nearly 3 degrees from the line joining the Sun and Earth produced. In the evening she is in Leo. On the 3d, at 7h. a.m. she is in Virgo, on the Equator, and moving S., directing her course towards Spica Virginis, which star she does not pass till noon on the 5th, her course lying 3° above the star; and during the night of the 5th, she will be some degrees E. of that star. On the 7th and 8th, she is in Libra; on the latter day she does not rise. On the 9th, she rises early in the morning, and she is in Ophiucus, her course lying towards a point 9° above Antares, which she passes at 5h. In the morning of the 10th, near which time she enters her last quarter. On the 11th and 12th, she is in Aquila; from the 13th, to the 15th, in Aquarius. On the 16th, at 9h. p.m. is New Moon, but without an eclipse, as she is then nearly 2 degrees from the line joining the Sun and the Earth. On the 19th, we shall see her crescent in the west, after Sunset, a considerable distance west of the Pleiades and Aldebaran, and her course is directed towards the latter. On the 19th and 20th, she is in Aries; on the 21st, from 8h. to 9h. in the evening she will be near Aldebaran, being about one degree below the star. On the 22nd, still in Taurus, and moving towards the Milky Way, which she will have just passed before rising on the 23rd. On the 23rd, at 5h. 40m., in the evening, she enters her 3rd quarter. On the 24th and 25th she is in Gemini, her course lying evidently several degrees S. of Castor and Pollux. On the 26th, she is in Cancer. From the 27th, to the 29th, she is in Leo, and in Virgo afterwards till the end of the month. On the 31st, at 9h. 17m. in the evening is Full Moon, when her distance from the line joining the Sun and Earth is less than a degree, and a visible eclipse of the Moon takes place. (See the month of April in the Almanack of last year).

The Eclipse begins at twenty-three minutes after eight in the evening. The middle is at twenty-seven minutes after nine, and the end is at half-past ten. At London about one-third of the Moon's diameter is eclipsed.

MERCURY will be in the constellation Pisces during the whole of this month.

He souths at 0h. 55m. p.m., at the altitude of 34°, and sets at 6h. 40m. p.m., midway between the W. and W. by S. points of the horizon; on the 16th, he souths at 1h. 11m. p.m. at the altitude of 46°, and he sets at 7h. 54m. p.m., near W. by N., being 1h. 50m. after the Sun has set; after the 16th, the Planet sets earlier, and the Sun later, and therefore, between the days of the 6th and the 20th, the time is very favourable for observing him. On the 21st, he souths at 0h. 58m. p.m. and sets at 7h. 48m. p.m. On the 26th, he souths at 0h. 32m. p.m., and sets at 7h. 22m. p.m. in the W. by N. On the 31st, the Sun and the Planet south at the same time. On the 6th, the Planet is in a line joining Alpha Andromedæ and Gamma Pegasi (the two eastern stars in the square of Pegasus) produced to 14° south of the latter star; on the 13th he is in a line joining Beta and Gamma Pegasi, produced and distant 12° from the latter; on the 20th he is 13° E.S.E. of Gamma Pegasi.

VENUS, on the 5th, will pass from the constellation Pisces into that of Cetus; and from the latter into Aries, on the 27th.

On the 1st she souths at 1h. 21m. p.m. at the altitude of 37°, and sets at 7h. 17m. p.m. near the W. point of the horizon. On the 15th, she souths at 1h. 29m. p.m., at the altitude of 44°, and sets at 8h. 1m. p.m., W. by N. On the last day she souths at 1h. 39m. p.m. at the altitude of 52°, and sets at 8h. 53m. p.m. in the W.N.W.

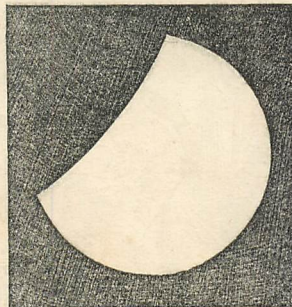
On the 1st, she will be situated nearly as described at the last day of February, and after this time she will be moving towards Alpha Arietis; on the 15th she, with Gamma Pegasi and Alpha Arietis, form a triangle, being at the distance of 22° from both stars, and below the line joining them. On the 28th, she is situated in a line joining the Pole Star, and Alpha Arietis, and at the distance of 11° south of the latter star.

On the 12th and 13th, she is very near Uranus; during the evening of the former day she will precede him by 2 minutes, and is nearly  $\frac{1}{2}$  a degree S. of him. During the evening of the 13th, she follows Uranus by 2 minutes, and both will appear in the field of view of the telescope at the same time, providing the magnifying power of the telescope is not great. Venus is exactly E. of Uranus, and, therefore, both objects will pass over the same part of the field, Uranus preceding Venus by two minutes. To those persons who have not seen Uranus, this will be a good opportunity of so doing, as it is seldom so good a guide can be given for finding him.

MARS will be in the constellation of Sagittarius before the 21st, and in that of Capricornus after that time. He rises near the S.E. by E. all the month; on the 1st at 4h. 30m.; on the 15th at 4h. 11m.; and on the last day at 3h. 40m. a.m. He souths on the 1st, at 8h. 24m., and on the last day at 7h. 56m. a.m. at an altitude of 15° at the beginning and of 18° at the end of the month.

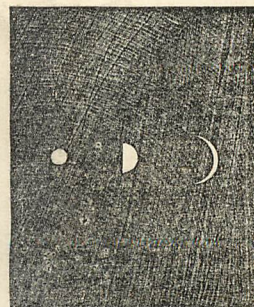
On the 1st, he with Alpha Ophiuchi and Alpha Aquilæ form a triangle, the Planet occupying the lower angle, distant from Alpha Ophiuchi by 43°, and from Alpha Aquilæ by 33°; on the 14th, 15th, and 17th, the planet is situated in the lines drawn from the Pole Star, through Gamma Aquilæ; Alpha Aquilæ and Beta Aquilæ respectively at the distance of 33° south of the 1st star; of 31° from the 2nd, and of 28° from the last, these three stars being those characteristic of the constellation Aquila. On the 24th he is situated in a line from the Pole Star, passing midway between Alpha Aquilæ, and that remarkable group of stars called Delphinus, following Alpha Aquilæ, and at about 30° distance from this star. He is also situated on this day in the line joining the Pole Star and Alpha Capricorni, continued 8° from the latter star.

ECLIPSE OF MOON ON THE 31ST.



MERCURY ON

1st 11th 25th



JUPITER will be in the constellation of Taurus throughout the month; and he will set at the N.W. by N. part of the horizon during that time; on the 1st at 1h. 55m. a.m.; on the last day at 0h. 17m. a.m. He souths at an altitude of 59° every day; on the 1st, at 5h. 50m. p.m.; on the last, at 4h. 8m. p.m.

His motion throughout the month is slowly towards the east; on the 1st day he is about 5° N. of Aldebaran, and towards the end of the month he is about 8° N.N.E. of that star, in a line joining it, and Beta Aurigæ; he is also about 15° east of the Pleiades.

SATURN rises about 4° N. of E.S.E. all the month; on the 1st, at 6h. 47m. a.m. and on the last, at 4h. 56m. a.m. On the same days he souths at 11h. 52m. a.m., and at 10h. 7m. a.m. respectively. He is moving slowly to the east, among the stars. At about the middle of the month he is at the distance of 25° S.S.W. of Alpha Pegasi; 33° S.W. of Gamma Pegasi (the two southern stars in the square of Pegasus) and 21° N. of Fomalhaut. This month is a bad one for observing him.

URANUS souths at an altitude of 43° on every day; on the 15th at 1h. 19m. p.m. He sets at 3° south of W. by N.; on the 1st, at 8h. 37m. p.m.; and on the last day at 6h. 49m. p.m.

## POSITION OF THE CONSTELLATIONS RISING ON THE MERIDIAN, AND SETTING ON THE 1ST. DAY AT 10h. P.M.

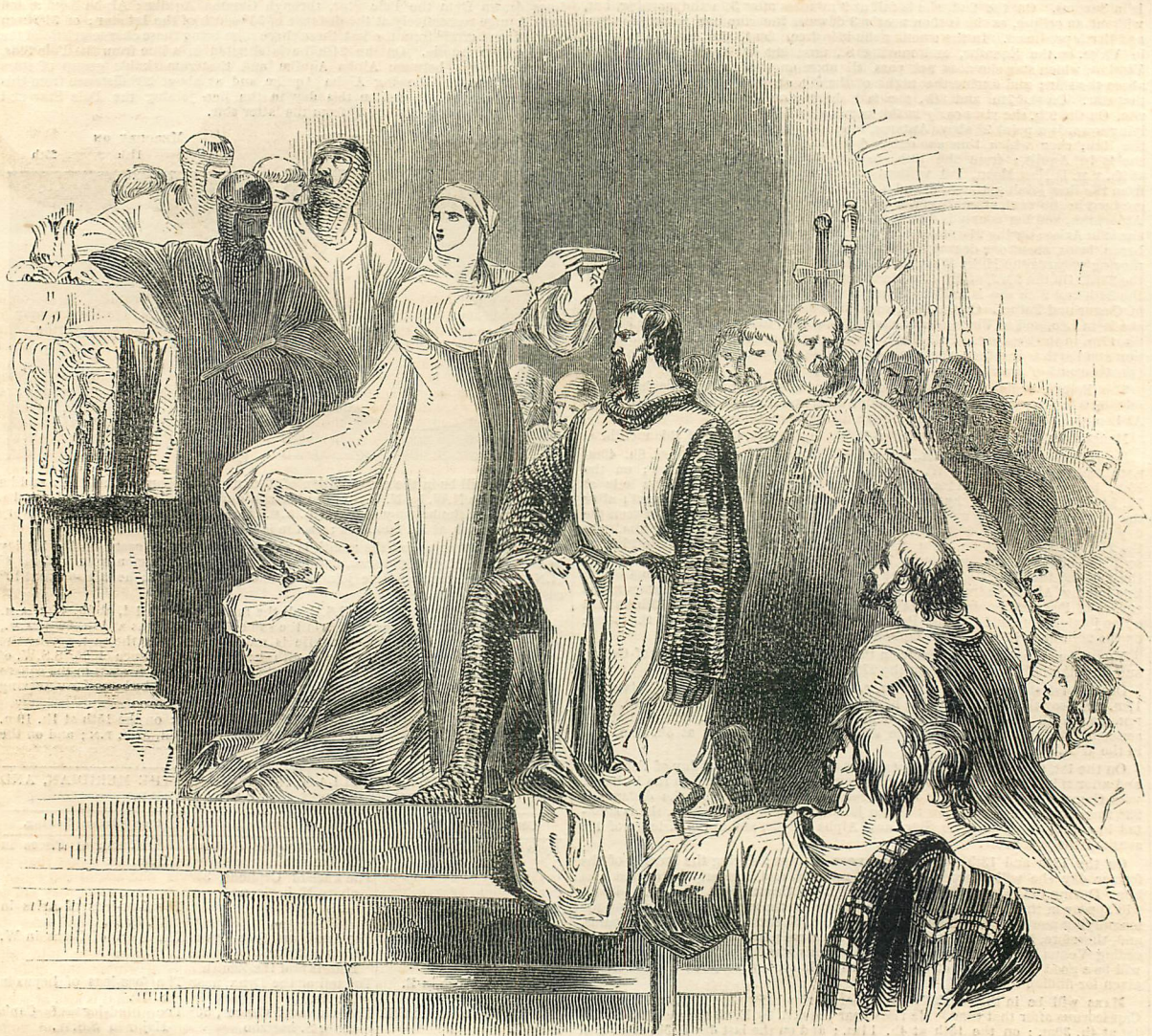
Constellations Rising.	Constellations on the Meridian	Constellations Setting.
Lyra in N.N.E.	The tail of Cygnus, 6° above N. horizon	The N. fish of Pisces in N.W.
The shoulders of Hercules in N.E. by E.	The knee of Cepheus, 35° above N. horizon	The fore-legs of Aries in W. by N.
The head of Serpens in E. by N.	Polaris	The head of Cetus in W.
The feet of Virgo in E.	The head and fore-legs of Ursa Major, between Polaris and the Zenith	The fore-legs of Lepus in S.W.
The feet of Corvus in S.E. by E.	The tail of the Lynx, near the Zenith	The hind-legs of Canis Major in S.S.W.
A part of Hydra in S.E.	The claws of Cancer, 50° above S. horizon	
	The head of Hydra, 45° above S. horizon	

Days of the Month.	Length of Day, or number of hours between sunrise and sunset.	Number of Hours and Minutes the day has increased since the Shortest Day.	Time of Day-break, or beginning of Twilight.	Time of Twilight ending.	JUPITER'S SATELLITES.						OCCULTATIONS OF STARS BY THE MOON.			
					Eclipses of						Names of the Stars.	Magni- tude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
					1st. Sat.	2nd. Sat.	3rd. Sat.	4th. Sat.	5th. Sat.	6th. Sat.				
1	H. M.	H. M.	H. M.	H. M.	D. H. M.	D. H. M.	D. H. M.	D. H. M.	D. H. M.	D. H. M.	Zeta 3 Libræ	6	{ 8 0 40 A. M.	Bright
6	11 8	3 23	4 43	7 41	6 7 42 P. M.	5 8 0 P. M.	12 10 35						1 26	Dark
11	11 29	4 44	4 32	7 49	20 11 33									
16	11 51	4 46	4 20	7 57	29 7 58									
21	12 9	4 24	4 7	8 8							115 Tauri	5	{ 22 6 33 P. M.	Dark
26	12 28	4 43	3 54	8 18									{ 7 41	Bright
31	12 49	5 4	3 41	8 30							Lambda Geminorum	5	{ 24 8 46 P. M.	Dark
													{ 9 33	Bright
											Alpha 2 Cancri	6	{ 6 7 41 P. M.	Dark
													{ 9 2	Bright

## TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Day of the Month.	MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.	
	Right Ascension	Declination	Right Ascension	Declination	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.
FULL MOON	23h.30m.	3° 53's.	23h.56m.	1° 46s.	18h.59m.	23° 20'	4h. 25m.	21° 13'	22h.26m.	11h.22m.	0h.46m.	4h.17m.
LAST QUARTER	10 4 39 A.M.	0 1	0 33N.	0 18	0 49N.	19 14	23 1	4 27	22 29	11 9	0 47	4 24
NEW MOON	16 9 11 P.M.	0 28	4 36	0 41	3 24	19 29	22 36	4 30	21 25	22 31	10 57	4 30
FIRST QUARTER	23 5 41 P.M.	0 45	7 36	1 3	5 58	19 45	22 6	4 32	21 31	22 33	10 44	4 36
FULL MOON	31 9 17 P.M.	0 52	9 4	1 25	8 28	20 0	21 30	4 35	21 38	22 36	10 32	4 43
APOGEE	2 2 P.M.	0 47	8 46	1 49	10 53	20 15	20 50	4 38	21 45	22 38	10 19	4 50
PERIGEE	16 0 P.M.											
APOGEE	29 6 P.M.											

## March Anniversary.



CROWNING OF BRUCE.

## THE CROWNING OF BRUCE.

27TH MARCH, 1306.

THE Earl of Gloucester, a kinsman of Bruce, had notice of his friend's danger, and anxious to save him, yet afraid in so serious a matter, too rashly to compromise his own safety, sent him a piece of money and a pair of golden spurs. Bruce understood the counsel thus symbolically communicated, and instantly set out for Scotland, accompanied by his Secretary and a single attendant. He is said to have reached Lochmaben Castle on the fifth day after his departure from London, and thence repairing to Dumfries, where Comyn was, he sought a private interview with him. From some inward misgiving, no doubt on the part of Comyn, the meeting took place in the convent of the Minorite friars. Here Bruce passionately reproached Comyn for his treachery, and after some altercation drew his dagger and stabbed him to the heart. Immediately hastening from the spot he called for his attendants, who seeing him pale and agitated inquired the cause. "I doubt I have slain Comyn," was the reply. "You doubt," cried Kirkpatrick, fiercely, "I see mak' sicker," and rushing towards Comyn, despatched him on the spot. Almost at the same moment Sir Robert Comyn, the uncle, who came into the convent on the noise of the scuffle, shared a similar fate. The alarm soon became general, and the English judges, then holding a court in a hall of the Castle, not knowing the extent of the danger, hastily barricaded the doors. Bruce, assembling his followers, surrounded the Castle, and threatening to force their entrance by fire, compelled those within to surrender. He soon afterwards proceeded to Scone, the ancient seat of Scottish inauguration, and was there crowned King of Scots, on the 27th March, 1306. Edward had carried the *regalia* to Westminster, but their place was soon supplied. The Bishop of Glasgow furnished from his own stores the robes in which Bruce was arrayed; and a slight coronet of gold being got from the nearest artist, the Bishop of St. Andrew's set it on his head. The Bishop of Glasgow also presented to the new King a banner wrought with the arms of Baliol, which he had concealed in his treasury, and under it Robert received the homage of those who devoted themselves to his service. The Earls of Fife had, from a remote antiquity, enjoyed the privilege of crowning the Kings of Scotland; but Duncan, the representative of the family, favouring at this time the English interest, his sister, the Countess of Buchan, with a boldness and enthusiasm which must have

added to the popular interest felt for the young King, repaired to Scone, and asserting the privilege of her ancestors, placed the crown a second time on the head of Bruce. The eyes of all Scotland were now directed towards Bruce. Comyn was no more; and the brave Sir William Wallace had been executed by the English. Bruce was therefore without a rival; he was the heir to the throne, and his past conduct had given ample earnest at once of his intrepidity and prudence; he was regarded as the last remaining hope of his country.

## BALLAD OF THE CROWNING OF THE BRUCE.

There is come to the Bruce from Edward's Court,  
From a kinsman true and bold,  
A rowell'd pair of golden spurs,  
With a money coin in gold;  
And the spurs say—"Fly! brook no delay,"  
And the coin—"Use gold to speed the way."

The Bruce is gone, and the storm-bird's wing  
Had never a swifter flight;  
In five short days, to the Scots' amaze,  
He is treading Lochmaben's height;  
And one other dash on his king-path sees  
The Bruce in the city of fair Dumfries!

He has flashed on the craven Comyn's gaze,  
By the Minorite Convent-gate,  
One deep reproach, one gurgling threat,  
One glance of deadly hate;  
And the sheath freed dagger is gleaming red  
In the burning blood of a traitor dead!

St. Andrew's mitred lord has placed  
On his head the light gold band,  
And the Baliol-broidered flag is waved  
By the Glasgow Bishop's hand;  
While under its bannered pomp men bring  
The homage of nobles to Bruce their King!

Then a glorious woman, wondrous fair,  
Steps out from the brilliant train,  
And is dazzling all with her beauty rare,  
While she crowns the Bruce again!  
May he not call the battle his own,  
When an angel leads him to Scotland's throne

MARCH.

In the month of March the woods and banks by the roadside are full of wild flowers; amongst the most beautiful of which may be mentioned primroses, violets, several kinds of veronica or speedwell, the common coltsfoot, with its golden star-like flowers without a single green leaf; the rare whitew grass, both white and yellow; the golden saxifrage; the little white wood anemone; and the lesser celandine, or pilewort, the shining golden yellow flowers of which appear at first sight to resemble those of the buttercup, though upon examination it will be found that their petals are numerous and sharp-pointed, while those of the buttercup are rounded, and their number never exceeds five.

Pansies, lilies, king-cups, daisies,  
Let them live upon their praises;  
Long as there's a sun that sets  
Primroses will have their glory;  
Long as there are violets  
They will have a place in story:  
There's a flower that shall be mine,  
'Tis the little celandine.  
  
See its varnish'd golden flowers  
Peeping through the chilling showers,  
Ere a leaf is on the bush,  
In the time before the thrush  
Has a thought about its nest,

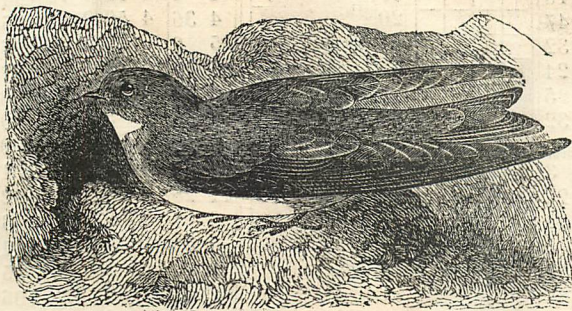
Thou wilt come, with half a call,  
Spreading out thy glossy breast,  
Like a careless prodigal;  
Telling tales about the sun  
When we've little warmth or none.  
  
Comfort have thou of thy merit,  
Kindly unassuming spirit;  
Careless of thy neighbourhood,  
Thou dost show thy pleasant face  
On the moor, and in the wood,  
In the lane—there's not a place,  
However mean it be,  
But 'tis good enough for thee.

WORDSWORTH.

Several of the forest trees are also now in flower; the willow, with its soft downy catkins; the acers, with their feathery blossoms; the elm, with tufts of purplish flowers, which, though too small to attract attention individually, yet give a kind of glow to the young shoots of the tree; and the lime, with its pale green flowers of delightful fragrance. The catkins of the hazel are now quite ripe, and the solitary crimson female flowers appear. The catkins of several kinds of poplars are also very conspicuous; and almost all the deciduous trees are partially in leaf. The black poplar, however, does not unfold its leaves till May, though it produces its large dark red catkins in March, and towards the end of this month they fall, looking like great caterpillars on the ground. The capsules of the female catkins are enveloped in white cotton.

In this month the underwood of woods and forests is generally cut down; and the timber trees are felled, as, from the rising of the sap, the bark is more easily separated from them in this month than in any other. In the gardens, the almond, the apricot, and the peach, are now generally in flower; the *Pyrus*, or *Cydonia japonica*, opens its bright scarlet blossoms; and the *Corchorus japonicus* or *Kerria japonica*, its brilliant yellow flowers. All the crocuses are in full beauty, and nearly all the different kinds of narcissus and jonquils.

Many birds are in full song in this month. The garden thrush is one of the most interesting of the British songsters; and, like the nightingale, it sings nearly all night. Its nest is large, but not very compact, and its eggs are of a bluish tint, with irregular brown blotches. It lives principally upon snails, cracking their shells against a stone; and an amusing story is told of a tame thrush, which, being let out of its cage to fly about a room, took its mistress's pincushion, which was made in a whelk's shell, and hit it as hard as it possibly could against the table, in hopes of breaking it, thinking, no doubt, that some kind of snail was concealed within it. When the garden thrush is disturbed on her nest, she ruffles her feathers, spreads her tail, and snaps her bill with great force to drive away the intruder. As a great many nests may be found at this season, it may be useful to observe that the eggs of singing birds are almost always speckled, and generally on a dark ground. The greenfinch, the common wren, and the willow wren, have white eggs, spotted with red; the eggs of the house sparrow are of a dingy green, streaked with black; and those of the hedge sparrow, the magpie, and the crow, are of a greenish blue. The eggs of the raven are large, and of a dark green, blotched with brown; those of the flycatcher are of a bright clear blue; and those of the kingfisher are white. The eggs of the nuthatch and of the greater titmouse are both white, with very small spots of red, and it is difficult to distinguish them from each other. The duck begins to lay in this month; the goose sits on her eggs; and the cock-pheasant begins to crow. At this season the curious nests of the sand-martins may be observed, and they consist simply of holes in the perpendicular front of a sand rock, being sometimes so deep as to take a man's arm up to his shoulder



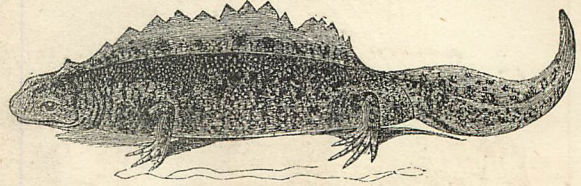
THE SAND MARTIN.

without reaching the bottom. Rennie gives the following description of the mode in which the sand martin builds its nest. He says he has seen "one of these swallows cling with its sharp claws to the face of a sand-bank, and peg in its bill as a miner would do his pickaxe, till it had loosened a considerable portion of the hard sand, and tumbled it down amongst the rubbish below. In these preliminary operations it never makes use of its claws for digging; indeed, it is impossible it could, for they are indispensable in maintaining its position, at least when it is beginning its hole." He also observes that the holes of some of these swallows are as nearly circular as if they had been drawn with a pair of compasses. The bird begins in the centre, and works outwards, changing its position continually, and it is as often hanging from the roof, with its back downwards, as standing on the floor. When the hole is of considerable depth, the bird "always scrapes out with its feet the sand detached by the bill; but, so carefully is this performed, that it never scratches up the unmined sand, or disturbs the plane of the floor, which rather slopes upwards, and, of course, the lodgment of rain is thereby prevented." There is a whole colony of these swallows in the sand-banks near Woking, in Surrey; and there are others in various parts of Great Britain, from Devonshire to the north of Scotland.

About this season frogs reappear. They pass the winter in a state of absolute torpidity, in the mud at the bottom of the water in which they generally live. "Here they congregate in multitudes, embracing each other so closely as to appear

almost as one continuous mass." (Bell.) On the return of spring, they separate from each other, and emerge gradually into active life. The eggs of frogs undergo eleven changes before the perfect animal is produced; and for at least a month they remain in what is called the tadpole state, in which the creature has a large head, and long body, but no legs.

The toad is torpid, like the frog, during winter; but it generally chooses for the place of its retreat some sheltered hole, or hollow tree.



THE COMMON WARTY NEWT: MALE.

The warty newt is in a state of great activity early in spring. It is common in ponds and large ditches, where it feeds upon the tadpole of the common frog. The male and the female newt are nearly the same in appearance during winter; but, in spring, a beautifully-cut crest rises from the back of the male, which is highly ornamental.

The manner in which the eggs are deposited is very interesting. "The female, selecting the leaf of some aquatic plant, sits, as it were, upon its edge; and, folding it by means of her two hinder feet, deposits a single egg in the duplication of the folded part of the leaf, which is thereby glued most securely together, and the egg is thus effectually protected from injury." As soon as the female has, in this way, deposited an egg, she seeks another leaf, on which she deposits another egg in the same manner; and in this way she proceeds till she has deposited as many eggs as she requires. The egg is very slightly tinged with buff, and it is surrounded by a substance resembling the white of a common egg, in which it keeps continually whirling round. It now goes through nine changes from the egg till it becomes a perfect insect, and for a considerable time it remains in a tadpole state, almost like the common frog.



THE COMMON SMOOTH NEWT: MALE.

The smooth newt is found in considerable numbers in almost every ditch and pond, especially where the water is tolerably clear; and it affords food not only to several kinds of fish, but to the warty newt, which is much larger than itself. Its own food consists of gnats, and other small insects, and also of the *Planorbis*, and other British molluscos animals, which it devours when they are quite young. In the month of June these animals quit the water, and remain for some time on land; the younger ones return to the water in autumn; but some of the older ones appear to become completely terrestrial, and may be found creeping about in damp places, near water, and sometimes venturing even into cellars. About the latter end of autumn, or the beginning of winter, the male newt acquires a crest, and his tail spreads out into a kind of web; both the tail and the crest being tipped with red. The body of the animal is also of a bright orange, passing into red; but, in June, when the newt quits the water, it loses its crest, its tail contracts, and its vivid colours change into a dull and uniform hue. The metamorphoses of this species differ very little from those of the larger kind, but the female is less careful in depositing her eggs, as she frequently lays three or four together upon an open leaf.

Bees generally become active in the month of March, as they are particularly fond of crocuses, which are generally in full flower in that month, and the bees partake so freely of their juices that it appears to intoxicate them. It is well known that the queen bee is longer and larger than the rest, and, as she is not intended for work, her movements are slow and apparently awkward. It is not, however, perhaps, so generally known that when bees swarm it is always the old queen that leaves the hive, while the young one remains behind. Bees are said to converse by crossing their antennae; and it is certain that before swarming the queen may be seen going from one end of the hive to the other, and laying her antennae across those of every working bee she meets with in the course of her progress; and also that each bee, as soon as she is touched, though quiet before, becomes instantly in a state of wonderful agitation, hurrying to and fro as though preparing for his journey, and at last joining the other bees that had been touched and all assembling together to be ready to attend their queen. The caddis worm, and other insects that live under water, sometimes begin to leave their cocoons in this month. The purple capricorn beetle, which is generally found feeding on the bark of trees that have been felled, goes into its chrysalis state in March, and reappears as a perfect insect in May or June. "When the insect is about to assume its chrysalis state, it bores down obliquely into the solid wood, to the depth sometimes of three inches, and seldom if ever less than two, forming holes nearly semi-cylindrical, and of exactly the form of the grub which inhabits them." This beetle is sometimes called the goat chaffer or musk beetle, on account of its smoky smell. The ground beetle is frequently found in the beginning of March, in paths near walls, where the sun has considerable power. It is one of the largest and most beautiful of the beetles which are natives of Great Britain. Its body is rather long and narrow; its head, breast, and wing cases are of a brilliant green, the latter being marked lengthwise with rows of oblong raised spots; and the under side of the insect is of a glossy black. The legs of this creature are remarkably long, and, when attacked, it runs away with amazing swiftness. It is generally found in gardens under heaps of decayed plants, or under stones. The larva of the beetle is a grub, and is very destructive, frequently continuing in its larva state three or four years, and eating voraciously during the whole of that time. Most insects eat only in the larva state, but the beetle continues to be destructive even when it is full grown.



NATIONAL SPORT, FRANCE—  
WOLF HUNT.

M D	W D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT				HIGH WATER At LONDON BRIDGE				Equa- TION OF TIME.	Day of the Year.	
			Rises.	SETS.	DECLINA- TION NORTH.	Rises. Afternoon	SOUTHS.	SETS. Morning.	Before Sunrise.			After Sunset.			Morning.	Afternoon			
									O'Clock.	2h.	3h.	4h.	Moons Age.	O'Clock.					8h.
1	Th	Maundy Thursday	5 38	6 31	4 25	7 27	Morning	5 44					16			2 30	2 47	4 4	91
2	F	Good Friday	5 36	6 33	4 48	8 30	0 52	6 10					17			3 2	3 19	3 46	92
3	S	Game Certifi. exp.	5 34	6 35	5 11	9 33	1 37	6 36					18			3 34	3 48	3 28	93
4	S	EASTER SUNDAY	5 31	6 37	5 34	10 35	2 24	7 10					19			4 4	4 19	3 10	94
5	M	Easter Monday	5 29	6 38	5 57	11 35	3 13	7 47					20			4 36	4 50	2 52	95
6	Tu	Easter Tuesday	5 27	6 40	6 19	Morning.	4 4	8 32					21			5 9	5 28	2 34	96
7	W	Easter Wednesday	5 24	6 41	6 42	0 29	4 56	9 24					22			5 47	6 9	2 17	97
8	Th	The Sun rises E. by N. and sets W. by N.	5 22	6 43	7 5	1 18	5 50	10 25					23			6 34	6 59	1 59	98
9	F	$\alpha$ Hydre Souths 8h. 10m. P.M.	5 20	6 44	7 27	2 2	6 44	11 32					24			7 30	8 5	1 42	99
10	S	Regulus Souths 8h. 45m. P.M.	5 18	6 45	7 49	2 40	7 38	Afternoon					25			8 47	9 30	1 26	100
11	S	LOW SUNDAY—so called because it was usual to repeat some part of the Easter festivities, and thus it was considered a feast of a lower order	5 15	6 47	8 11	3 12	8 33	2 3					26			10 11	10 50	1 9	101
12	M		5 13	6 48	8 33	3 45	9 28	3 24					27			11 28		0 53	102
13	Tu		5 11	6 50	8 55	4 14	10 23	4 44					28			0 1	0 30	0 37	103
14	W		5 9	6 52	9 17	4 45	11 18	6 5					29			0 55	1 19	0 22	104
15	Th	Easter Term begins	5 7	6 54	9 39	5 17	Afternoon	7 25					30			1 42	2 5	0 7	105
16	F	Mars rises at 3h. 9m. A.M.	5 5	6 55	10 0	5 51	1 11	8 42					1			2 27	2 50	Sub- tract.	106
17	S	Spica Virginis souths at 11h. 35m. P.M., 23 deg. high	5 2	6 57	10 21	6 29	2 8	9 53					2			3 14	3 36	0 22	107
18	S	2ND SUN. AFT. EA.	5 0	6 59	10 42	7 14	3 4	10 57					3			3 56	4 18	0 36	108
19	M	St. Alphege	4 57	7 1	11 3	8 5	3 59	11 51					4			4 39	5 0	0 50	109
20	Tu	$\beta$ Leonis Souths 9h. 47m. P.M.	4 56	7 2	11 24	9 1	4 52	Morning.					5			5 22	5 44	1 3	110
21	W	Regulus souths at 8h. 2m. P.M. 51 deg. high	4 55	7 4	11 44	10 0	5 42	0 38					6			6 6	6 30	1 16	111
22	Th	Venus sets 10h. 3m. P.M.	4 53	7 6	12 5	11 0	6 29	1 16					7			6 57	7 25	1 29	112
23	F	St. George	4 51	7 8	12 25	Afternoon	7 14	1 47					8			7 58	8 34	1 41	113
24	S	$\beta$ Corvi Souths 10h. 16m. P.M.	4 49	7 10	12 45	1 6	7 58	2 15					9			9 14	9 49	1 52	114
25	S	St. Mark the	4 47	7 11	13 5	2 9	8 41	2 40					10			10 26	11 0	2 4	115
26	M	Evangelist	4 45	7 13	13 24	3 10	9 23	3 4					11			11 35		2 14	116
27	Tu	$\eta$ Bootes Souths 11h. 26m. P.M.	4 43	7 14	13 43	4 12	10 5	3 26					12			0 5	0 27	2 25	117
28	W	The Sun rises E.N.E. and sets W.N.W.	4 41	7 16	14 2	5 16	10 49	3 48					13			0 48	1 7	2 34	118
29	Th	Mars rises 2h. 41m. A.M.	4 39	7 17	14 21	6 21	11 34	4 13					14			1 26	1 43	2 44	119
30	F	Arcturus souths at 11h. 36m. P.M. 58 deg. high	4 37	7 19	14 40	7 23	After Midnight.	4 40					15			2 0	2 15	2 52	120

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## APRIL.

**THE MOON** from the 1st to the 6th rises during the evenings. On the 1st, very nearly at the same time as Spica Virginis, from which star she is distant a few deg. N. and during the night is moving eastward from it. On the 2d, she is in Virgo; on the 3d and 4th, in Libra, directing her course a few deg. N. of Antares. On the 5th, 6th, and 7th, she is in Ophiuchus; on the 5th being N.E. of Antares.

On the 8th, at 3h. 26m. in the afternoon, she enters her 3rd quarter and does not rise on the 8th at all. On the 9th, she rises early in the morning, and is in Aquila. On the 10th, 11th, and 12th, she is in Aquarius. On the 13th, in Pisces; and at 7h. A.M., on the Equator, moving N. On the 15th and 16th, in Aries. On the 15th, at 6h. 22m. in the morning is new. And as the line joining the Sun and the Earth passes nearly through the centre of the Moon, a total eclipse of the Sun takes place, but it is invisible in this country.

On the 17th, 18th, and 19th, she is in Taurus, her crescent being seen soon after sunset, on the 18th a little E. of Aldebaran, and directing her course to the Milky Way. On the 19th, she is in part of Orion in the Milky Way. On the 20th and 21st in Gemini, being on the latter day a few deg. S.E. of Castor and Pollux. On the 22nd, at 9h. 9m. in the morning she enters her first quarter, and is in Cancer. From the 23rd to 25th, she is in Leo. On the 24th, during the evening, she is a few deg. below Regulus, moving Eastward from the star. On the 26th, at 9h. is on the Equator, and going S. From the 26th to the 29th, is in Virgo. On the 28th, before midnight, she is W. of Spica Virginis; and at midnight passes the star, being about 3° N. On the 30th, she is in Libra; and at 1h. 26m. P.M. is full, but without an eclipse, being 23° from the Ecliptic.

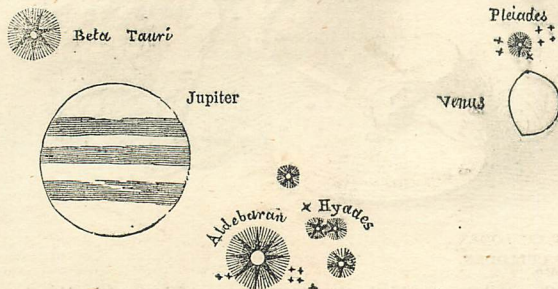
**MERCURY** will be in the constellation of Pisces till the 17th, and after that time in that of Cetus; on the 1st he rises at 5h. 23m. A.M., in the E. by N.; and souths a few minutes before the Sun. On the 6th, he rises at 5h. 0m. A.M.; and on the 11th, at 4h. 44m. A.M.; on the 16th, at 4h. 32m. A.M.; on the 21st, at 4h. 21m. A.M.; and on the 26th, at 4h. 13m. A.M. Between the 14th and the 24th, he rises very nearly E., and after the latter time a little N. of E., and souths at an altitude of 38° at about 10h. 25m. A.M. At about the middle of the month he rises only about half an hour before the Sun, and, therefore, he is not favourably situated for observation; at that time he is about 14° S.E. of Gamma Pegasi.

**VENUS** will be in the constellation of Aries till the 14th, on which day she passes into that of Taurus.

On the 1st she souths at 1h. 40m. P.M., at the altitude of 52°; and sets at 8h. 56m. in the W.N.W. On the 15th, she souths at 1h. 52m. P.M., at the altitude of 58°; and sets at 9h. 41m. P.M. near N.W. by N. On the 30th, she souths at 2h. 8m. P.M. at the altitude of 62°; and sets at 10h. 26m. P.M., nearly midway between N.W. by N. and N.W.

On the 1st, she is situated about 21° from the Pleiades, and 10° from Alpha Arietis, and she forms, with those two objects, a triangle, being below the line joining them; she is moving towards the Pleiades till the 18th, being, however, on the 9th in a line joining the Pole Star, Beta Persci, and Alpha Ceti, and distant 14° N. of the latter star. During the evening of the 16th she is E., and during that of the 17th she is W. of the Moon; and on the former she is about 5°, and on the latter about 3° above her. On the 18th, she is 3° S. of the Pleiades, and after this time she is moving from them. On the 28th, she, with the Pleiades and Aldebaran, form a right angled triangle, being distant 10° E. of the Pleiades, and 6° N. of Aldebaran; after this time, to the end of the month, she is a little E. of the line joining the Pole Star and Aldebaran, and moving towards the Planet Jupiter.

RELATIVE SITUATION AND APPEARANCE OF JUPITER AND VENUS ON APRIL 18TH.



The Planets are drawn on a scale of 40" to an inch. The centre of each Planet

is the part to be referred to in comparison with the situation of the neighbouring stars, and to each other.

**MARS** will be in the constellation of Capricornus till the 26th, and in that of Aquarius after that time. He rises near the S.E. by E. at the beginning; midway between S.E. by E. and E.S.E. about the middle; and near the E.S.E. at the end of the month. On the 1st, at 3h. 39m.; on the 15th, at 3h. 11m., and on the last day, at 2h. 34m. A.M. He souths on the 1st, at 7h. 56m. at an altitude of 19° and on the 30th at 7h. 25m. A.M., at an altitude of 24°.

On the 1st he is situated in a line drawn from the Pole Star through Delphinus, and at 35° distance from these stars. On the 18th, he is situated in a line joining the Pole Star and Beta Aquarii; produced to the distance of 11° S. of the latter star; he is also 38° distant from Alpha Pegasi, and 35° from Alpha Aquila. On the 30th, he is situated in a line joining the Pole Star and Alpha Aqrarii produced 13°; and he is 30° from Alpha Pegasi.

**JUPITER** will be still in the constellation of Taurus throughout the month. He sets a little N. of the N.W. by N. point of the horizon. On the 1st a 0h. 14m. A.M. On the 5th he sets twice on the same day, viz., at 0h. 1m. A.M., and at 1h. 58m. P.M. On the last day he sets at 10h. 54m. P.M. He souths at an altitude of 61°. On the 1st, 4h. 4m., and on the last day, at 2h. 34m. P.M.; on the 1st, he is about 8° N.N.E. of Aldebaran, and he is moving eastward towards the Milky Way during the month; at the end of the month he is nearly in a line joining Capella and Rigel, being 24° distant from the former, 31° from the latter, and about 7° W. of the Milky Way. The star 3° above him, is Beta Tauri.

**SATURN** rises about midway between E.S.E. and E. by S. all the month; on the 1st, at 4h. 52m. A.M., and on the 30th, at 3h. 2m. A.M. He souths at an altitude of 28°; on the 1st, at 10h. 4m., and on the last day, at 8h. 20m. A.M. His motion among the stars is very slowly towards the E. He is situated nearly in a line joining Alpha Pegasi and Fomalhaut, and nearly midway between them; his distance from the former being 24°, and from the latter 22°. These two stars are the guiding stars for finding him throughout the remainder of the year.

**URANUS** during this month, rises, souths, and sets very nearly at the same times as the Sun does—and, therefore, he cannot be seen. On the 9th he passes from the constellation of Cetus to that of Pisces, in which he remains during the remainder of the year.

TIMES OF THE SOUTHING, &c. OF THE PRINCIPAL FIXED STARS, WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Stars Names.	Mag. num.	Time of south- ing during the evening of the 1st day.	Height in degrees above the horizon S (South) N (North)	Setting.	
				No. of hours from southing.	Point of the horizon.
Castor	3	6 47	71°s	9	Near N.W.
Procyon	1	6 53	44s	6½	Near W. by N.
Pollux	2	6 58	67s	9	Near N.W.
Alpha Hydræ	2	8 42	31s	5½	Near W. by S.
Regulus	1	9 21	51s	7½	W.N.W.
Alpha Ursæ Majoris	1	10 15	79N	Never Sets	
Beta Leonis	2	11 2	54s	7½	Near W.N.W.

POSITION OF THE CONSTELLATION'S RISING ON THE MERIDIAN, AND SETTING ON THE 1st DAY AT 10H. P.M.

Constellations Rising.	Constellations on the Meridian.	Constellations setting.
The following wing of Cygnus in N.N.E.	A part of Cepheus 20° above N. horizon	The body of Andromeda near N.W. by N.
Lyra, 13° high above N.E.	Polaris	Musca, between N.W. and N.W. by W.
The head of Hercules, and the head of Ophiuchus, midway between E. by N., and E.N.	The hind legs of Ursa Major, and the stars Alpha & Beta (the pointers) between Polaris and the Zenith	The neck of Taurus, 10° high above W. by N.
The middle of Serpens, between E. and E. by S.	Leo, 50° above S. horizon	Orion in W. by S.
Both scales of Libra in E.S.E.	The body of Hydra 25° above S. horizon	The head of Canis Major in S. W. by N.
The tail of Hydra in S.E.		

Days of the Month.	Length of Day, or number of hours between Sun-rise and Sunset.	Number of hours and minutes the day has increased since the Shortest Day.	Time of Daybreak, or beginning of Twilight.	Time of Twilight Ending.
1	H. M. 12 53	H. M. 5 8	H. M. 3 38 A.M.	H. M. 8 31 P.M.
6	13 13	5 28	3 24 "	8 43 "
11	13 32	5 47	3 9 "	8 53 "
16	13 50	6 5	2 54 "	9 6 "
21	14 9	6 24	2 38 "	9 21 "
26	14 28	6 43	2 21 "	9 32 "
30	14 42	6 57	2 6 "	9 50 "

JUPITER'S SATELLITES.					
Eclipses of					
1st. Sat.			2nd. Sat.		
Emersion.			Emersion.		
D. H. M.	D. H. M.	D. H. M.	D. H. M.	D. H. M.	D. H. M.
5 9 54 P. M.			6 7 40 P. M.		
21 8 14 P. M.			13 10 15 P. M.		
3rd. Sat.					
6 8 15 P. M. } Emersion					
13 9 40 P. M. } Immersion					

OCCULTATIONS OF STARS BY THE MOON.			
Names of the Stars.	Mag. num.	Times of disappearance and re appearance of the Star.	At the dark or bright limb of the Moon.
A2 Cancri	6	D. M. M. 22 11 24 P. M. 23 0 16 A. M.	Dark Bright
Lambda Virginis	4	30 4 16 A. M.	Nearly Full Moon
		At the time the star emerges the Moon will have set.	

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee) from the Earth in each Lunation.

Days of the Month.	LAST QUARTER	NEW MOON	FIRST QUARTER	FULL MOON	PERIGEE	APOGEE
	.. 8D. 3H. 26M. P.M.	.. 15 6 22 A.M.	.. 22 9 9 A.M.	.. 30 1 26 P.M.	.. 13 11 P.M.	.. 26 6 P.M.
	1	6	11	16	21	26
	0h. 32m	6° 53'	2h. 17m	13° 39'	20h. 33m	19° 56'
	0 20	3 48	2 41	15 49	20 48	4 46
	11 0	14 1 38	3 5	17 49	21 3	4 50
	0 15	0 26	3 29	19 37	21 17	4 53
	0 23	0 18	3 54	21 13	21 32	4 58
	0 37	1 8	4 19	22 34	21 46	5 2
						22 29
						22 49
						9 14
						10° 5'
						0h. 53m
						0 54
						5 4
						5 11
						5 18
						5 24

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.	
	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.
1	0h. 32m	6° 53'	2h. 17m	13° 39'	20h. 33m	19° 56'	4h. 42m	21° 54'	22h. 40m	10° 5'	0h. 53m	4° 59'
6	0 20	3 48	2 41	15 49	20 48	19 5	4 46	22 1	22 42	9 54	0 54	5 4
11	0 14	1 38	3 5	17 49	21 3	18 11	4 50	22 8	22 44	9 43	0 55	5 11
16	0 15	0 26	3 29	19 37	21 17	17 13	4 53	22 15	22 46	9 33	0 56	5 18
21	0 23	0 18	3 54	21 13	21 32	16 11	4 58	22 22	22 48	9 23	0 57	5 24
26	0 37	1 8	4 19	22 34	21 46	15 6	5 2	22 29	22 49	9 14	0 58	5 30

NOTE.—Declination is angular distance from the Equator, and it is North or South according as the object is North or South of the Equator; when, therefore, an object is on the Equator, it has no Declination.

## April Anniversary.



THE BATTLE OF CULLODEN.

## THE BATTLE OF CULLODEN,

"Drumossie Muir, Drum o'ossie day,  
A wae'ful day it was to me;  
For there I lost my father dear,  
My father dear and brethren three."

Thus celebrated battle was fought on the estate of Culloden, Inverness, on April 16, 1746, and which is memorable as having put an end to the Rebellion. On the night preceding, the Highlanders had intended to surprise the Duke of Cumberland, in his camp, at Nairn; but this scheme having failed, they took up a position on the Moor of Drumossie, their left wing towards the house of Culloden, where the declivity of the hill was soft and marshy, their right slightly protected by a stone wall. The ground was unfavourable, and the Highlanders were weakened by hunger and fatigue, so that it had been judged expedient to withdraw to the hills; but the difficulty of finding subsistence for the men, and the importance of protecting Inverness, determined the Prince Charles Edward and his councillors to venture a battle. Drawn up in a line in the position above mentioned while waiting for the signal to charge, the Highlanders suffered greatly from the English artillery. Exasperated, at last, beyond endurance, the centre rushed forward; and the last charge of the Highlanders, under their patriarchal discipline, and with their peculiar arms, is thus vividly described in Chambers's "History of the Rebellion":—

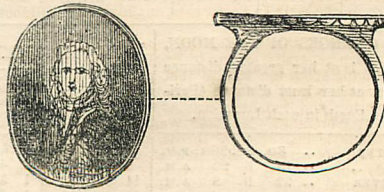
"A lowland gentleman, who was in the line, and who survived till a late period, used always, in relating the events of Culloden, to comment with a feeling of something like awe upon the terrific and more than natural expression of rage which glowed in every face and gleamed in every eye, as he surveyed the extended line at this moment. Notwithstanding that the three files of the front line of English poured forth their incessant fire of musketry; notwithstanding that the cannon, now loaded with grape-shot, swept the field as with a hail-storm; notwithstanding the flank fire of Wolf's regiment, onward went the headlong Highlanders, flinging themselves into, rather than rushing upon, the lines of the enemy, which, indeed, they did not see for the smoke till involved among their weapons. It was a moment of dreadful, agonising suspense, but only a moment, for the whirlwind does not sweep the forest with greater rapidity than the Highlanders cleared the line. They swept through and over that frail barrier almost as easily and instantaneously as the bounding cavalcade brushes through the morning labours of the gossamer which stretch across its

path; not, however, with the same unconscionness of the events! Almost every man in their front rank, chief and gentleman, fell before the deadly weapons which they had braved; and although the enemy gave way, it was not till every bayonet was bent and bloody with the strife.

"When the first line had been completely swept aside, the assailants continued their impetuous advance till they came near to the second, when, being almost annihilated by a profuse and well directed fire, the shattered remains of what had been, but an hour before, a numerous and confident force, at last submitted to destiny by giving way and flying. Still, a few rushed on, resolved rather to die than thus forfeit their well-acquired and dearly-estimated honour. They rushed on, but not a man ever came in contact with the enemy. The last survivor perished as he reached the points of the bayonets."

It is said, that in one place, where a vigorous attack had been made, their bodies were afterwards found in layers three or four deep.

The right wing of the Highlanders, advancing at the same time, was attacked in flank by the English cavalry and broken; the left withdrew almost without sharing in the fight. About 600 men were killed on each side. The battle, however, was decisive; the Prince fled to the mountains, and some days after, gave



SIGNET-RING OF THE PRETENDER.

notice to his partisans to provide for their own safety, declining to continue the contest with 8000 men, who were ready to meet him in Badenoch. This memorable event has given rise to many plaintive popular songs: a verse from one of which, pathetically lamenting the horrors of war, is quoted above.

## APRIL.

In the month of April most of the trees are in leaf, and all nature looks so gay and beautiful, that we cannot refrain from quoting the exquisite lines of Mrs. Hemans, called "The Voice of Spring"—

I come, I come! ye have call'd me long,  
I come o'er the mountains with light and song!  
Ye may trace my step o'er the waking earth,  
By the winds which tell of the violet's birth,  
By the primrose stars in the shadowy grass,  
By the green leaves opening as I pass.

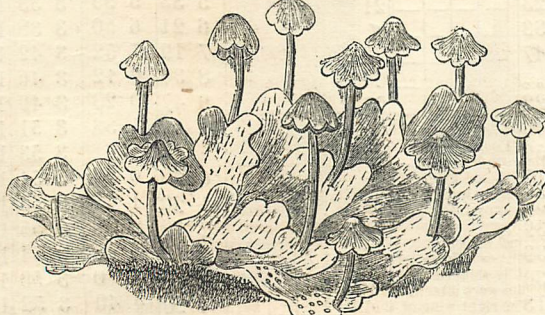
I have breath'd on the South, and the chestnut flowers  
By thousands, have burst from the forest bowers,  
And the ancient graves, and the fallen fauces,  
Are veil'd with wreaths on Italian plains;  
But it is not for me, in my hour of bloom,  
To speak of the ruin or the tomb!

I have pass'd o'er the hills of the stormy North,  
And the larch has hung all its tassels forth,  
The fisher is out on the sunny sea,  
And the rein-deer bounds through the pasture free,  
And the pine has a fringe of softer green,  
And the moss looks bright, where no step has been.

At this season a great variety may be observed in the colours of the young leaves of the trees: the balsam poplar, which is one of the earliest, has its leaves of a beautiful yellowish green; the lilac, which is also early, is of a bluish green; some oaks are almost yellow, and others are of a bright reddish brown, with a tinge of yellow; the beech is of a purplish and rather dingy brown; the elm has large red bracts, which fall off as the leaves, which they enclose, unfold; and the lime has leaves of a peculiarly soft and tender green. The blossoms of the forest trees now also begin to show themselves; those of the lime are peculiarly fragrant, and they have attached to them a long, thin, membranous bract, which renders them easy to be recognised. The flowers of the acers have no petals, but the anthers of their stamens are deeply coloured—sometimes red and sometimes yellow, so that they are very ornamental; the flowers of the sycamore are drooping and very elegant. On the plane trees, the ball-like fruit of the previous year is probably still hanging, while the young leaves are opening; those of the American plane (*Platanus occidentalis*) are invested in a cottony down, which falls off when the buds burst, in such quantities as to make the Americans call the tree the cotton wood. Towards the end of this month, the large red catkins of the black poplar begin to fall, and look on the ground like caterpillars of the goat moth (*Cossus ligniperda*). The catkins of the Italian poplar (*Populus monilifera*) also begin to fall towards the latter end of April, and scatter masses of cottony substance upon the ground, till it is quite white beneath the trees. The ash, in this month, produces its curious seed pods, which, in some parts of Great Britain, are called keys, and in others cocks and hens. The hop hornbeam and the common hornbeam are also in flower in this month, and are very ornamental. Among the herbaceous plants are cowslips, polyanthus, and the arum, so beautifully described by Clare:

How sweet it used to be, when April first  
Unclos'd the arum leaves, and into view  
Its ear-like spindling flowers their cases burst,  
Beting'd with yellowish white or luscious hue;  
Ah, how delighted, humming all the time  
Some nameless song or tale, I sought the flowers;  
Some rusby dyke to jump, or bank to climb  
Ere I obtained them; while from hasty showers  
O'er under trees we nestl'd in a ring,  
Calling our "lords and ladies"—O ye hours!

Dog violets, purple anemones, several kinds of orchis, the wood sorrel, ground ivy, the white meadow saxifrage, the forget-me-not and wood scorpion grass, with various kinds of ranunculus or crow-foot, and the globe flower, make the fields and banks a mass of beauty. The flowers of the marsh-marigold, and those of the water ranunculus, adorn the ponds and pieces of stagnant water; and, in short, the whole country is covered with flowers. One curious plant, which is found only at this season, is the toothwort (*Lathraea squamaria*). It grows on the roots of trees and has a yellow stalk, clothed with white tooth-like scales instead of leaves, and bearing very pale purple flowers. Another curious plant, which is in perfection at this season, is a kind of liverwort (*Marchantia hemisphaerica*), which, in fruit, looks like a number of little green



MARCHANTIA HEMISPHERICA.

toadstools growing out of flat leaves, and which is generally found with the common liverwort, on the earth in flower pots, on the banks of ditches, or in the moist crevices of rocks.

Among the birds of this month, the most interesting is, undoubtedly, the nightingale, which generally arrives in England about the middle of April, and commences singing about the 26th of that month. It is elegant in its shape, though its plumage is only of a dull, greenish brown. The song of the male bird, during the pairing and hatching seasons, is probably finer than that of any other bird. It "breathes," as Isaac Walton expresses it, "such sweet, loud music out of its little instrumental throat, that it might make mankind think that miracles had not ceased." He, that at midnight, when the very labourer sleeps securely, should hear, as I have very often, the clear airs, the sweet descant, the natural rising and falling, the doubling and re-doubling of that sweet voice, might well be lifted above the earth, and say, "Lord, what music hast thou provided for the saints in Heaven, when thou affordest bad men such music on earth?" It is a curious circumstance that, when the nightingale has once begun to sing, it is very difficult to make it stop. Even a stone thrown into the bush has no effect; and an attempt to seize the bird will only make the song cease for a few moments, as the bird, as soon as it has found a more secure posi-

tion, will recommence its song as loudly and as beautifully as before. An alarm before the bird had begun to sing would, however, probably prevent it from singing at all that night. The black-cap, or mock nightingale, is another singing bird which is generally heard in the month of April. It has a merry, cheerful song; and, though it sometimes imitates the nightingale so well as to be mistaken for that bird, yet it never can preserve its imitation long. It seems such a little madcap, that it can't bear control, and must burst forth again into its own wild, joyous notes of glee. The cuckoo begins to sing about the 14th of April, which is still called Cuckoo Day in some parts of England; and many old persons consider that they shall be unlucky all the year if they do not hear the cuckoo on that day. The wood wren, or petty-chap, sings in April. It is a beautiful little bird, of so bright a green, that it is called, in Germany, the leaf-bird, or the green wren. The redstart, the titlark, the willow wren, the sedge warbler, and many other birds, begin to sing in this month.

In this month several luminous insects appear, the most remarkable of which are the glow-worm and the scolopendra. The scolopendra being seldom found, except in dry, gravelly soils, many people are comparatively little acquainted with it. It is a long, slender insect, white, or of a cream-colour, tinged with red, and having numerous feet. It lives on the ground; and, when it is seen crawling by night, it leaves a long, brilliant line of light behind it. A curious battle between one of these insects and a stag beetle is related in the *Magazine of Natural History* for 1832:—"A gentleman was walking in a flower garden, when he perceived that one of the beds was almost covered with a brilliant light. The light was brighter than that of the glow-worm, and six or seven inches square; and it appeared so extraordinary, that he was determined to examine it. When he approached the spot, he saw, to his great surprise, a large star-beetle, quite covered with the luminous matter, which seemed to confuse and bewilder it, for it staggered about in a most extraordinary manner. Observing the beetle closely, he found that it was running and stumbling to and fro, as if blinded by its own unnatural light; every now and then stopping and thrusting its head into the ground, and rolling itself over and over, as if to try to get rid of its fiery coating. In all its movements, however, it seemed quite unable to escape from the spot of illuminated ground; as, though it was incessantly running round and round, it never attempted to pass the boundary. The gentleman, as he watched the beetle, became more and more puzzled to discover the cause of this singular scene; till at last he discovered, beyond the boundary, a *Scolopendra electrica*, a perfect line of silvery light, slowly, but gracefully, winding itself away, without leaving the least mark by which its track could be discovered." Snails are now abundant and active, destroying almost every kind of vegetation they can find. The female earwig may sometimes be found under stones, or in some sheltered situation, placed over a heap of eggs, which she appears to brood over as carefully as a hen does over her chickens. The young are seldom hatched before the middle of May; and when they first leave the egg they are nearly white. The earwig is almost the only insect that takes care of her young; as generally, insects, after laying their eggs, leave them to be hatched by the sun. The supposition that earwigs gnaw the drum of the ear is a vulgar error, as the forceps of the earwig are not strong enough to divide the skin. The insect vulgarly called the death-watch, is usually heard at this season. It is a species of *Anobium*, a genus of small beetles. These insects live entirely upon wood: the eggs appear to have been deposited near some crack in a piece of furniture, or on the binding of an old book. As soon as the larvae are hatched, they begin to eat their way into the furniture on which they have been deposited, and when they have attained a sufficient depth, they undergo their transformations, and return, by another passage, as beetles. In furniture that has been attacked by them, little round holes, about the size of the head of a pin, may be seen, and these are the holes that have been made by the beetles. The noise which has given rise to the name of death-watch, is made by the insect striking its head against the wood. The larva is called a book-worm, when it attacks books; and old books that are seldom used are often found bored through by it; as, though it prefers the cover, when it has finished one side it searches for the other, and takes the nearest way to it by boring through the leaves of the book, however thick the volume may be. Kirby and Spence mention that in one case twenty-seven folio volumes were eaten through in a straight line by this insect. The beetle is very small, and almost black. The head is particularly small, and, from the prominence of the thorax, looks as if it were covered with a hood. Another insect of the same genus (*Anobium puniceum*) attacks dried objects of natural history, and all kinds of bread and biscuits, particularly sailors' biscuits, in which its maggots frequently abound. In collections of insects it first consumes the interior; and when the larva assaults birds, it is generally the feet that it devours first; and in plants, the stem, or ligneous part. The larva is a small white maggot, usually curled; and the body, which is wrinkled, consists of several segments covered with fine hairs. The jaws are strong and horny, and of a dark brown. The pupa is white, but so transparent that all the parts of the perfect insect may be seen through it. The beetle is of a reddish brown, covered with fine hairs.



THE DEATH-WATCH.

The saw-fly, which is so destructive to the gooseberry bushes, generally makes its appearance in the month of April, issuing from the ground in which it has lain from the preceding September. The fly has a flat yellow body, and four transparent wings, the outer two of which are marked with brown on the edge. The female lays her eggs on the underside of the leaf



ANOBIIUM PUNICEUM.



THE SAW-FLY OF THE GOOSEBERRY.

on the projecting veins, and they are so firmly attached that they cannot be removed without crushing them. It is supposed that the female insect makes a number of very small cuts in the projecting veins of the leaf, and lays an egg in each; so that the edges of the wounded membrane grasp and hold firmly the part of the egg which is thrust into the gap by the insect. Similar insects attack the leaves of the osier and the alder.

NATIONAL SPORT, GERMANY—  
WILD-BOAR HUNT.

M	D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER			EQUA- TION OF TIME.	Day of the Year.
			Rises.	Sets.	DECLINA- TION NORTH.	Rises.	SOUTH.	Sets.	Before Sunrise.	O'Clock.	After Sunset.	At London Bridge	At Noon.	Subt.		
			H. M.	H. M.	Deg. Min.	H. M.	H. M.	H. M.	1h. 2h. 3h.	1h. 2h. 3h.	9h. 10h. 11h.	Morning.	Afternoon.	M. S.		
1	S	St. Philip	4 35	7 21	14 58	8 27	Morning.	5 10			16	2 33	2 49	3 0	121	
2	S	4TH SUNDAY AFT.	4 33	7 23	15 16	9 29	1 9	5 46			17	3 5	3 24	3 8	122	
3	M	EASTER	4 31	7 24	15 34	10 26	2 0	6 29			18	3 39	3 57	3 15	123	
4	Tu	Regulus Souths at 7h. 12m. P.M., 51 deg. high	4 29	7 26	15 52	11 16	2 53	7 20			19	4 12	4 30	3 22	124	
5	W	Leonis Souths at 8h. 49m. P.M.	4 28	7 27	16 9	Morning.	3 46	8 18			20	4 50	5 10	3 28	125	
6	Th	St. John	4 26	7 29	16 26	0 2	4 40	9 23			21	5 33	5 55	3 33	126	
7	F	Corvi Souths at 9h. 25m. P.M.	4 24	7 30	16 43	0 42	5 34	10 33			22	6 21	6 50	3 38	127	
8	S	Half Quarter	4 22	7 32	17 0	1 16	6 27	11 47			23	7 19	7 52	3 42	128	
9	S	ROGATION SUN.	4 21	7 34	17 16	1 45	7 19	Afternoon			24	8 30	9 12	3 46	129	
10	M	Bootis Souths at 10h. 34m. P.M.	4 19	7 35	17 32	2 15	8 12	2 22			25	9 47	10 23	3 49	130	
11	Tu	Spica Virginis Souths at 10h. 0m. P.M., 23 deg. high	4 17	7 36	17 47	2 43	9 5	3 40			26	11 0	11 33	3 51	131	
12	W	Ascension Day	4 16	7 38	18 3	3 13	9 59	4 59			27			3 53	132	
13	Th	Holy Thursday	4 14	7 39	18 18	3 45	10 55	6 17			28	0 30	0 54	3 54	133	
14	F	The ILLUSTRATED	4 12	7 41	18 33	4 21	11 51	7 31			29	1 20	1 44	3 55	134	
15	S	London News first pub- lished, 1842	4 11	7 42	18 47	5 3	Afternoon	8 39			1	2 10	2 30	3 55	135	
16	S	S. AFT. ASCEN.	4 10	7 44	19 1	5 51	1 44	9 30			2	2 55	3 15	3 54	136	
17	M	Arcturus Souths at 10h. 29m. P.M., 53 deg. high	4 8	7 45	19 15	6 45	2 39	10 30			3	3 40	4 0	3 53	137	
18	Tu	Corona Borealis Souths at 11h. 4m. P.M.	4 7	7 47	19 28	7 43	3 32	11 13			4	4 20	4 40	3 52	138	
19	W	St. Dunstan	4 5	7 48	19 42	8 46	4 22	11 47			5	5 2	5 25	3 50	139	
20	Th	Sun in Taurus	4 4	7 49	19 54	9 50	5 9	Morning.			6	5 45	6 8	3 47	140	
21	F	Sun enters Gemini	4 3	7 51	20 7	10 54	5 54	0 17			7	6 33	7 0	3 44	141	
22	S	Trinity Term beg.	4 1	7 52	20 19	11 56	6 37	0 44			8	7 23	7 50	3 40	142	
23	S	WHIT SUNDAY	4 0	7 53	20 31	Afternoon	7 19	1 8			9	8 23	9 0	3 36	143	
24	M	Birth Q. Victoria	3 59	7 55	20 42	2 1	8 1	1 30			10	9 32	10 3	3 31	144	
25	Tu	Whit Tuesday	3 58	7 58	20 53	3 4	8 44	1 52			11	10 33	11 5	3 26	145	
26	W	Oxford Term beg.	3 57	7 57	21 4	4 6	9 28	2 16			12	11 34		3 20	146	
27	Th	Camb. Term div.	3 56	7 59	21 14	5 12	10 15	2 42			13	At Midnight.	0 25	3 14	147	
28	F	The Sun rises near N.E. by N., and sets near N.W. by N.	3 55	8 0	21 24	6 16	11 3	3 11			14	0 44	1 5	3 7	148	
29	S	Restor. K. Chas.	3 54	8 1	21 34	7 20	11 54	3 44			15	1 28	1 45	3 0	149	
30	S	TRINITY SUNDAY	3 53	8 2	21 43	8 19		4 25			16	2 6	2 25	2 52	150	
31	M	Antares Souths at 11h. 45m. P.M., 12 deg. high	3 52	8 3	21 52	9 13	0 47	5 14			17	2 43	3 2	2 44	151	

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## MAY.

THE MOON rises during the evenings between the 1st and the 4th. On the 1st day she is in the Constellation of Libra, and on the 2nd and 3rd, in that of Ophiuchus. On the 2nd, she rises before Antares, which star is S.E. of her during the night. Her course lies through a barren region, and her nightly recess from Antares will be for some time the chief object of notice. On the 4th at the time of rising she is seen near the E. edge of the Milky Way, and during the night she is moving from it. On the 4th and 5th, her course is very near the boundary of the constellations of Sagittarius and Aquila. On the 5th, she does not rise till after midnight. On the 7th, she is in Capricornus; at 10h. 49m. on this day she enters her last quarter. On the 8th and 9th, she is in Aquarius, on the latter day, being directly under the square of Pegasus. On the 10th, at 3h. p.m. she is on the Equator, going N. On the 11th and 12th, she is in Pisces, the square of Pegasus being W. of her. On the 13th and 14th, she is in Aries, and on the latter day, at 3h. 23m. p.m. she is new, but without an eclipse, as she is then 3 degrees from the line joining the Sun and Earth. On the 15th and 16th, she is in Taurus, on the 17th in Gemini, and her crescent may be seen soon after Sun-set at a considerable distance S.W. of Castor and Pollux. On the 18th she will be about 16° S. of Castor, and she will set under Castor and Pollux. On the 19th she is in Cancer, a region marked by no principal stars. From the 20th to the 23rd, she is in Leo, moving towards Regulus till midnight on the 21st, at which time she passes this star, and she is E. of Regulus after that time. On the 21st, at 1h. 59m. A.M., she enters her 1st quarter. On the 24th, at 5h. A.M. she is on the Equator, and going S., directing her course towards Spica Virginis. On the 24th, 25th, 26th, and 27th, she is in Virgo; during the night of the 24th, she is W. of Spica Virginis, which star she passes before rising on the 25th, so that during the night of the latter day, she is E. of that star. On the 28th and 29th, she is in Libra, on the 30th, in Ophiuchus, and in Sagittarius on the last day, her course being over the E. branch of the Milky Way. On the 30th day, at 2h. 46m. she is full, but without an eclipse, she being 4½ degrees from the Ecliptic.

MERCURY, on the 1st passes from the constellation Cetus into that of Pisces; on the 11th, into Cetus again; on the 14th into Aries, and on the 25th into Taurus. During the first half of the month he is rather favourably situated for observation, and may be seen before sun-rise. On the 1st, 6th, 11th, 16th, 21st, and 26th, he rises at 4h. 2m.; 3h. 54m.; 3h. 47m.; 3h. 40m.; 3h. 36m.; and 3h. 34m. in the mornings respectively. On the 1st, at a little N. of E.; on the 10th, at E. by N.; on the 20th, at E.N.E., and on the 31st at the N.E. by N. points of the horizon. He souths on the 1st, at 10h. 20m. A.M., at an altitude of 41°; on the 15th, at 10h. 37m. A.M., at an altitude of 48°; and on the 31st day at 11h. 34m. A.M., at an altitude of 59°. His position, therefore, during the month, varies rapidly.

VENUS will be in the constellation of Taurus, till the 14th, and in that of Gemini after that time.

On the 1st, she souths at 2h. 10m. P.M., and sets at 10h. 29m. P.M.; on the 15th, she souths at 2h. 28m. P.M., and sets at 10h. 55m. P.M.; and on the last day, she souths at 2h. 47m.; and sets at 11h. 10m. P.M. The altitude at the time of southing is between 62° and 64°, and she sets nearly midway between N.W. by N. and N.W., throughout the month.

On the 1st, she is 9° N.E. of Aldebaran, and about 5° W. of Jupiter; on the 5th, during the evening, Venus and Jupiter are near together, the former being about 2° N. of the latter, and both objects are nearly in the line joining the Pole Star, Capella and Rigel, Venus being 21° distant from Capella, and 33° from Rigel. On the 6th, she will have passed to the east of Jupiter, but still near him. Both objects, after this time, are moving nearly in the same direction, but the much greater rapidity of the motion of Venus will cause them to become more and more separated day by day. Venus is moving towards a point south of Castor and Pollux; between the 8th and the 17th, she will be crossing the Milky Way, and at the end of the month she is situated about 8° S. of Castor, and 4° S. of Pollux, these three objects forming a pretty little triangle, of which Venus occupies the lower angle.

She is in the neighbourhood of the Moon during the evenings of the 16th and 17th days; being about 8° E. of her on the 10th, and about the same distance W. on the 17th.

MARS will be in the constellation Aquarius till the 27th, and in that of Pisces after that time.

He rises at the E.S.E. at the beginning; midway between E.S.E. and E. by S. at the middle, and at E. by S. at the end of the month; on the 1st at 2h. 32m.; on the 15th; at 2h. 0m., and on the last day at 1h. 32m. A.M. He souths on the 1st and last days, at 7h. 24m., and 6h. 48m. A.M., at the altitude of 26° and 32° respectively.

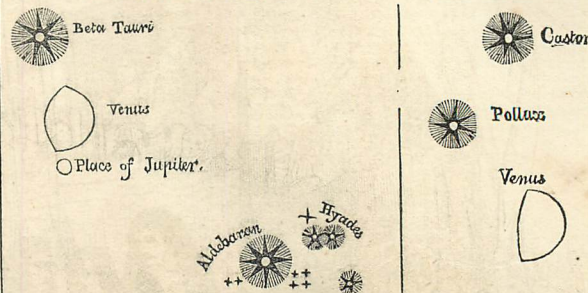
On the 1st, he is situated in an imaginary line drawn from the Pole Star to Alpha Aquarii, and continued 13° from the latter star. On the 22nd, a line from Beta Pegasi through Alpha Pegasi (the western pair of stars forming the

square of Pegasus) continued to the distance of 23° from Alpha Pegasi indicates the place of the Planet, and after this time he is moving eastward.

JUPITER will be in the constellation Taurus all this month. He sets about 3° N. of the N.W. by N. point of the horizon; on the 1st, at 10h. 40m. P.M., on the last day, at 9h. 15m. P.M. He souths at 2h. 30m. P.M., on the 1st day, and at 1h. P.M. on the last day.

RELATIVE SITUATION OF VENUS AND JUPITER WITH RESPECT TO THEMSELVES AND TO NEIGHBOURING STARS, ON MAY 6.

RELATIVE SITUATION OF VENUS TO NEIGHBOURING STARS ON MAY 31.



Venus is drawn on a scale of 40' to an inch. The place of Jupiter is only indicated as if drawn it would give the appearance of overlapping Venus, whilst there is some distance between them. The apparent size of Jupiter is the same as represented in last month.

On the 1st, he is a little eastward of the position he occupied the last day of April; about the 20th, he will be in the Milky Way, and on the last day he will have passed about one-third of its breadth. From the middle to the end of the month, he is situated about 23° N. of the three stars in Orion.

SATURN rises from 2° to 3° south of the E. by S. throughout the month; on the 1st, at 2h. 59m. A.M., and on the last day at 1h. 5m. A.M. He souths at an altitude of 30°; on the 1st, at 8h. 16m. A.M., and on the last day at 6h. 22m. A.M. He is situated as in April, except that he will have moved 1° nearer to Alpha Pegasi, and the same distance further from Fomalhaut. From the middle of the month, to the end, he is very nearly stationary among the stars.

### TIMES OF THE SOUTHING, &c. OF THE PRINCIPAL FIXED STARS WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Star's Names.	Magnitude.	Time of southing in the evening of the 1st. Day.	Height in degrees above the horizon. S (South). N (North).	Setting.	
				Number of hours from southing.	Point of the horizon.
Alpha Ursæ Majoris	1	8 17	79°N	Never Sets	
Beta Leonis	2	9 4	54s	7½	Near W.N.W.
Spica Virginis	1	10 40	28s	5	Near W. by S.
Arcturus	1	11 32	58s	7½	N.W. by W.

### POSITIONS OF THE CONSTELLATIONS RISING, ON THE MERIDIAN, AND SETTING ON THE 1ST. DAY AT 10H. P.M.

Constellations Rising.	Constellations on the Meridian	Constellations Setting.
Lacerta in N.N.E.	The body of Andromeda near the N. horizon	The feet of Andromeda N. by W.
Vulpecula et Anser in N.E. by E.	Cassiopeia, 18° above N. horizon	Medusa's head in Perseus, in N.N.W.
Aquila near E. by N.	Polaris	The horns of Taurus in N.W.
The legs of Ophiuchus in E.S.E.	The tail of Ursa Major, between Polaris and the Zenith	The head of Orion in W. N.W.
The head of Scorpio in S.E. by E.	The fore-legs of Canes Venatici, 70° above the S. horizon	The head and chest of Monoceros, in the W.
The head of Centaurus in S. by E.	Virgo, 40° above the S. horizon	
	The tail of Corvus, 25° above the S. horizon	

JUPITER'S SATELLITES.					OCCULTATIONS OF STARS BY THE MOON.				
Days of the Month.	Length of Day, or number of hours between Sun-rise and Sunset.	Number of hours and minutes the day has increased since the Shortest Day.	Time of Day-break, or beginning of Twilight.	Time of Twilight ending.	Eclipses of	Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Stars.	At the dark or bright limb of the Moon.
1	H. M. 14 46	H. M. 7 1	H. M. 2 4	H. M. 9 52	Are not visible, Jupiter being too near to the Sun.	k Geminorum	5	D. H. M. 18 8 50 P. M.	Dark
6	15 3	7 18	1 45	10 10		Zeta 3 Libræ	6	28 7 48 P. M.	Bright
11	15 19	7 34	1 25	10 28		Zeta 4 Libræ	6	28 9 4 P. M.	Bright
16	15 34	7 49	1 2	10 52		Chi Ophiuchi	5	28 10 15 P. M.	Bright
21	15 48	8 3	0 30	11 51				29 9 46 P. M.	Full Moon
26	16 1	8 16	No real Night, but constant Twilight					10 4	nearly
31	16 11	8 26							

May 5d. 8h. P.M., the 2nd, 3rd, and the 4th Satellites of Jupiter are near together, and W. of the Planet: the 1st Satellite at the same time is E. and near the Planet.

### TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Days of the Month.	LAST QUARTER	NEW MOON	FIRST QUARTER	FULL MOON	PERIGEE	APOGEE
..	7d. 10h. 49m. P.M.	14 3 23 P.M.	22 1 59 A.M.	30 2 46 A.M.	11d. At Midnight	23 9 P.M.

RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.									
MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.	
Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination South.
1 0h.55m	2° 45'	4h.45m	23° 41'	22h. 0m	13° 59'	5h. 6m	22° 36'	22h.51m.	9° 5'
6 1 18	5 0	5 11	24 31	22 14	12 48	5 11	22 42	22 53	8 57
11 1 44	7 46	5 37	25 4	22 28	11 36	5 15	22 48	22 54	8 50
16 2 13	10 55	6 3	25 20	22 41	10 22	5 20	22 53	22 55	8 44
21 2 47	14 19	6 29	25 18	22 55	9 6	5 25	22 58	22 56	8 38
26 3 25	17 45	6 55	24 58	23 8	7 50	5 30	23 2	22 57	8 33
									1 3
									5° 37'
									5 43
									5 48
									5 54
									5 59
									6 4

## May Anniversary.



THE RESTORATION OF KING CHARLES II.

## THE RESTORATION OF KING CHARLES II.

This important event in our national history has been so minutely described by the diarists of the time, and their accounts have been so often quoted, that we shall content ourselves with chronicling a few of the leading details.

Pepys, the quaint and garrulous Secretary of the Admiralty, has left us the liveliest record of the incidents immediately preceding the Restoration. On this occasion he appears to have accompanied Sir Edward Montagu, afterwards Earl of Sandwich, as secretary, in the fleet which brought home the King. When the House of Commons voted his Restoration, they also voted that £50,000, "to be borrowed of the City," should be given to the Sovereign for the supply of his immediate necessities; and how greatly he stood in need of this supply may be gathered from the following entry of Pepys, under May 17, 1660: "This afternoon Mr. Edward Pickering told me in what a sad poor condition for clothes and money the King was, and all his attendants, when he came to him first from my lord, *their clothes not being worth forty shillings, the best of them*; and how overjoyed the King was when Sir J. Grenville brought him some money—so joyful that he called the Princess Royal (Mary, eldest daughter of Charles I.) and the Duke of York to look upon it, as it lay in the portmanteaus before it was taken out."

Admiral Sir Edward Montagu had received orders from the Council of Parliament to bring over the King, and accordingly he sailed for the Hague, where, on the 21st of May, Charles and his suite were received on board Montagu's ship (the name of which, on the same day, he altered to the *Charles*), "amidst infinite shooting of guns;" and after dinner the fleet weighed anchor, and set sail for England. It is interesting to read how Pepys had previously been through the fleet to proclaim the King, and of the joyous reception he had met with from every ship; how the heart of the staunch Royalist must have then leapt with joy. Then, with what minuteness he relates the conduct of the King on the passage; how restlessly he walked up and down, "very active and stirring;" how, upon the quarter-deck, he fell into discourse of his escape from Worcester, where it made poor Pepys "ready to weep to hear the stories that he told of his difficulties that he had passed through; of his travelling four days and three nights on foot, every step up to his knees in dirt, with nothing but a green coat and a pair of country breeches on, and a pair of country shoes that made him so sore all over

his feet that he could scarce stir; yet he was forced to run away from a miller and other company that took them for rogues." On the same evening Pepys heard some of the suite "talking of more of the King's difficulties, as how he was fain to eat a piece of bread and cheese out of a poor body's pocket" &c.

On the 25th Charles landed at Dover; "the King and the two Dukes (of York and Gloucester) did eat their breakfast before they went, and there being nothing but ship's diet they eat of nothing else but peas and pork, and boiled beef." Pepys continues, "Dr. Clerke, who eat with me, told me how the King had given £50 to Mr. Shepley, for my lord's servants, and £500 among the officers and common men of the ship. Great expectation of the King making some knights, but there was none. About noon (though the brigantine that Beale made was then ready to carry him), yet he, the King, would go in my lord's barge with the two dukes. Our captain steered, and my lord went along bare with him. I went, and Mr. Maunsell, and one of the King's footmen, and a dog that the King loved, in a boat by ourselves, and so got on shore when the King did, who was received by General Monk with all imaginable love and respect at his entrance upon the land at Dover," where he did not stay, but got into "a stately coach there set for him, and so away through the town towards Canterbury."

Two days afterwards Admiral Montagu was invested with the George and Garter on board his own ship, as General Monk had also been at Canterbury on the preceding day. The King entered London on his birthday, May the 29th, and "with him," says Evelyn, in his "Diary," under that date, "a triumph of about 20,000 horse and foot, brandishing their swords and shouting with inexpressible joy; the ways strewed with flowers; the bells ringing, the streets hung with tapistry, fountains running with wine; the mayor, aldermen, and all the companies in their liveries, chains of gold, and banners; lords and nobles clad in clump of silver, gold and velvet; the windows and balconies all set with ladies; trumpets, music, and myriads of people flocking even so far as from Rochester, so as they were seven hours in passing the city, even from two in the afternoon till nine at night." "I stood in the Strand and beheld it," continues Evelyn, "and blessed God." Such a scene of impressive pageantry our artist has attempted to represent in the above picturesque engraving.

## MAY.

MAY is proverbially the month of flowers. The hawthorn, the blackthorn or sloe, the horse chestnut, and many other ornamental trees and shrubs, are now in all their beauty; and almost innumerable herbaceous plants are in full flower. Among the most conspicuous of these is the lady-smock (*Cardamine pratensis*), which grows in such profusion in moist meadows, near water, that it looks, at a little distance, like linen laid out to bleach; and hence its common English name. The marsh marigold, with its golden yellow flowers, is very abundant in marshy places, in this month; and Jack-by-the-hedge—a plant which has a strong flavour of garlic, and clusters of cruciferous white flowers—is found abundantly in the hedge banks, and affords a useful vegetable to those who like its flavour. The cotton grass (*Eriophorum vaginatum*) produces its downy seed in this month, and the places where it abounds look, at a little distance, as if covered with snow. In the gardens, the lilac, the laburnum, and the wistaria are in flower among the trees; while tulips, anemones, various kinds of ranunculus, and many other beautiful flowers, decorate the beds. Towards the close of the month, several curious wild flowers may be found, one of the most remarkable of which is that called Herb Paris (*Paris quadrifolia*). This plant, in



HERB PARIS.

some parts of the country, is called one-berry, or true-love, from its fruit being a single purple berry, growing in the centre of a green-spreading calyx. The flowers are green, and of no beauty. The plant is only found in sheltered woody spots, and it is generally considered poisonous.

Beneath the shade,  
A beauteous herb, so rare, that all the woods  
For far and near around, cannot produce  
Its like, shoots upright; from the stalk  
Four pointed leaves, luxuriant, smooth, diverge,  
Crown'd with a berry of deep purple hue.

GRAHAM.

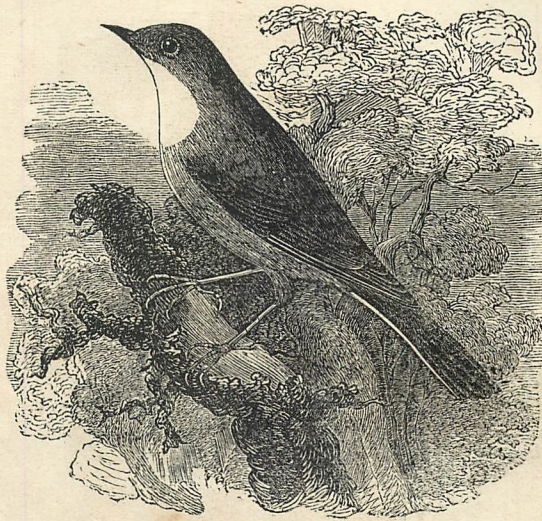
Another poisonous plant, which is found in great abundance at this season, is the wild chervil, also called the May-weed, or cow-parsley. It is an unbeliferous plant, with white flowers, which, Lees tells us, it produces in such abundance, as often to "completely cover and whiten over whole fields, especially in the vicinity of coppices." The white-rot, or marsh-penny wort (*Hydrocotyle vulgaris*), and the red rattle (*Pedicularis sylvatica*), are found in boggy places. The common wallflower, and the curious little plant called the wandering sailor, or ivy-leaved snapdragon, grow on walls; and the greater celandine (*Chelidonium majus*) is generally found in country churchyards. This latter plant has yellow flowers and bluish-green leaves, and, when broken, its juice is yellow and glutinous. It is said, when diluted with milk, to remove white specks from the eyes; and, formerly, it was supposed to be used by swallows to make their young see, as it was supposed that the young birds, when first hatched, were blind. The plant is still called swallow-wort in many parts of the country, in allusion to this superstition; though, in the north, another plant is known by that name. Among the water plants, the fringed buckbean (*Menyanthes trifoliata*) is conspicuous, from its beautiful yellow flowers; and the water crowfoot, from its star-like flowers of silvery white. Several kinds of orchis are in flower during this month.

Birds are particularly abundant in the month of May, and nearly every bush resounds with their notes. It is indeed, perhaps, in this month that the songs of wild birds are heard in their greatest perfection; and those who are interested in the subject will be amused to find what very different sounds the same birds can produce. The call note of each bird, for instance, is quite distinct from its sharp chattering note of fear; and both, again, are quite different from the full melodious song of the male while the female is sitting on her nest. The willow warbler, which is generally heard in this month is one of the few birds that sings as it flies. It builds its nest on the ground, and the nest itself is so oddly shaped that in some parts of the country it is called an oven.

The nightingale sings through the greater part of the month of May; but, towards the close of the month, the female makes her nest, generally of oak leaves lined with dry grass, and places it on the ground, among materials of the same nature as those of which it is composed, so that it can scarcely be seen. The female lays four or five eggs, which are of a dark brown or dusky green; and, as soon as these eggs are hatched, the male ceases to sing; and, instead of doing so, makes a fearful noise like the croaking of a frog. "The croaking of the nightingale, at the end of May, and in June," says Knapp, "is not occasioned by the loss of voice; but by a change of note—a change of object. His song ceases when his mate has hatched her brood; vigilance, anxiety, caution, now succeed to harmony, and his croak is the hush, the warning of danger or suspicion, to the infant charge and the mother-bird."

The sharp shrill call of the whitethroat is generally heard early in May, and soon after, its proper song. It is a lively and interesting little bird, with a

very sweet, clear, and loud song. It lives principally upon insects, though it is sometimes found to attack cherries, currants, strawberries, and other soft juicy fruits. It is said to be easily caught in a trap baited with a living caterpillar, a common house fly, or a butterfly. When kept in a cage, it should have some fine gravel in the bottom, and plenty of water inside, to allow it to wash, which it will do two or three times a day.



THE COMMON WHITETHROAT.

During the spring, the thrush is heard nearly all day, but towards the end of May it sings principally in the morning and evening; and sometimes, it continues its song all night. It has been observed, indeed, that the thrush dislikes hot, dry weather, as much as the blackbird; and it is well known that the blackbird always sings in wet weather, and particularly in a thunder-storm. The blackbird sings early in the morning, and late in the evening, but not so late as the thrush. The woodlark and the sedge-warbler also sing in the night, during the hot weather of summer, and the hedge-sparrow and the cuckoo have been heard to call as early as three o'clock in the morning. The turtle-dove is generally heard first in the woods, in May; and about the same time is first seen the curious bird called the sandpiper or marine snipe, and also, sometimes, the pigmy curlew, from its singular and somewhat monotonous cry. This bird is elegant in its form, with very long slender legs, and a long, slender, and slightly curved beak. These birds are remarkable for a change of colour in their feathers, which is produced by a partial moult in summer; but this elegant summer plumage falls off, and the bird resumes its ordinary feathers in autumn. The sandpiper is only found near the sea, as its food consists of the small crabs and molluscous animals it finds in the sand, just on the verge of the waves. The water-hen or moor-hen (*Gallinula chloropus*), builds her nest about this time. The following interesting account of a water-hen's attachment to her young is related in Mr. Waterton's delightful *Essays on Natural History*.—"In 1826, I was helping a man to stub some large willows near the water's edge. There was a water-hen's nest at the root of one of them. I had seven eggs in it. I broke two of them, and saw that they contained embryo chicks. The labourer took up part of the nest, with the remaining five eggs in it, and placed it on the ground about three yards from the spot where we had found it. We continued in the same place for some hours afterwards, working at the willows. In the evening, when place for some hours afterwards, working at the willows. In the evening, when we went away, the old water-hen came back to the nest. Having no more occasion for the labourer in that place, I took the boat myself the next morning, and saw the water-hen sitting on the nest. On approaching the place, I observed that she had collected a considerable quantity of grass and weeds, and that she had put them all around the nest. A week after this I went to watch her, and saw she had hatched; and, as I drew nearer to her, she went into the water with the five little ones along with her."

The wireworm is the larva of a beetle; and in general, when a whitish-looking grub is found buried in the ground, it may be presumed to be the larva of some destructive kind of beetle, and should be destroyed.

Glowworms are very abundant in this month, and the female may always be detected at night by her light, though by day she can hardly be distinguished from a woodlouse. The male insect has wings and no light. It is properly a kind of beetle, and it was supposed to live entirely upon vegetable matter till a few years ago, when a French naturalist who had taken the larvae of some glow-worms to watch their habits, accidentally gave them a dead slug among the leaves with which he usually fed them. The next morning, when he went to look at his glow-worms, they were nowhere to be found. On turning over the leaves, however, he found, to his great surprise, that they had buried themselves in the body of the slug; and he afterwards found that his insects would eat a dead slug every day. A live snail was afterwards put to the same larvae, and after a long battle they succeeded in killing it and finally devouring it.

The ephemera or Mayflies appear towards the latter end of this month. These little creatures, it is well-known, live as flies only one day; but they pass two or three years in their larvæ state. They undergo their transformations buried in the earth on the sides of ponds, the entrance to their habitation being below the surface of the water. On a warm evening towards the end of May, about sunset, these insects burst from the bank that has sheltered them, and rise in incredible numbers into the air, casting off the exuvie or skins which had enveloped them, which fall as a shower of snow as the insects rise. In less than two hours the female insects have laid their eggs, which are about eight hundred in number. These eggs are closely glued together, so as to form two little packets, each about a quarter of an inch long, and as soon as they are laid they are deposited in the water by their parent, who dies as soon as she has performed her task.



NATIONAL SPORT, PERSIA—  
WILD ASS HUNT.

M	D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.				MOON.				DURATION OF MOONLIGHT			HIGH WATER		EQUA- TION OF TIME.	Day of the Year.	
			Rises.	Sets.	DECLINA- TION NORTH.	Deg. Min.	Rises. Afternoon	Sets. Morning.	Before Sunrise. O'Clock. 1h. 2h. 3h.	After Sunset. O'Clock. 9h. 10h. 11h.	Moon's Age.	Morning.	Afternoon					
1	It	<i>St. Nicomede</i>	3 51 8	4 22 0	10 2		10 2	6 10				18			3 20	3 39	2 36	152
2	W	Arcturus Souths at 9h. 26m. P.M., 58 deg. high	3 50 8	5 22 9	10 43		10 43	7 14				19			4 0	4 20	2 27	153
3	It	<i>Corpus Christi</i>	3 50 8	6 22 17	11 21		11 21	8 23				20			4 40	5 0	2 18	154
4	F	$\eta$ Bootis Souths 8h. 56m. P.M.	3 49 8	7 22 24	11 50		11 50	9 36				21			5 20	5 45	2 8	155
5	S	<i>St. Boniface</i>	3 49 8	8 22 31	Morning.		5 16	10 51				22			6 12	6 40	1 58	156
6	S	1st S. AFT. TRIN.	3 48 8	9 22 37	0 19		6 8	Afternoon				23			7 8	7 40	1 48	157
7	M	$\alpha$ Coronae Bor. Souths 10h. 25m. P.M.	3 47 8	10 22 44	0 48		7 0	1 25				24			8 10	8 48	1 37	158
8	Tu	Spica Virginis Souths at 8h 10m. P.M., 28 deg. high	3 47 8	11 22 49	1 15		7 52	2 41				25			9 24	9 55	1 26	159
9	W	Sun in Gemini; on the 21st passes into Cancer	3 46 8	12 22 55	1 44		8 45	3 58				26			10 30	11 2	1 14	160
10	Th		3 46 8	12 23 0	2 19		9 40	5 12				27			11 36		1 3	161
11	F	<i>St. Barnabas</i>	3 45 8	13 23 4	2 56		10 35	6 22				28			0 7	0 35	0 51	162
12	S	$\alpha$ Serpentis Souths at 10h. 14m. P.M.	3 45 8	14 23 8	3 41		11 31	7 26				29			1 3	1 30	0 38	163
13	S	2ND S. AFT. TRIN.	3 45 8	15 23 12	4 32		Afternoon	8 20				30			1 53	2 20	0 26	164
14	M	$\alpha$ Herculis Souths 11h. 37m.	3 45 8	16 23 15	5 24		1 20	9 8				1			2 42	3 0	0 14	165
15	Th	Antares Souths at 10h. 45m. P.M., 12 deg. high	3 44 8	16 23 18	6 28		2 12	9 47				2			3 25	3 45	0 1	166
16	W	$\alpha$ Ophiuchi Souths 11h. 46m.	3 44 8	16 23 21	7 32		3 10	10 18				3			4 5	4 25	Add.	167
17	Th	<i>St. Alban</i>	3 44 8	16 23 23	8 37		3 47	10 46				4			4 44	5 3	0 25	168
18	F	Battle of Waterloo	3 44 8	17 23 25	9 42		4 32	11 11				5			5 25	5 45	0 38	169
19	S	The Sun rises 4 deg. N. of N.E. by N.	3 44 8	18 23 26	10 44		5 15	11 36				6			6 5	6 23	0 51	170
20	S	3RD S. AFT. TRIN.	3 44 8	18 23 27	11 47		5 57	11 57				7			6 50	7 8	1 4	171
21	M	Summer Solstice	3 44 8	18 23 27	Afternoon		6 39	Morning.				8			7 35	8 0	1 17	172
22	Tu	Summer commen.	3 45 8	19 23 27	1 53		7 23	0 19				9			8 30	9 3	1 30	173
23	W	Midsummer Eve	3 45 8	19 23 27	2 55		8 7	0 44				10			9 35	10 4	1 43	174
24	Th	Midsummer Day	3 45 8	19 23 26	4 0		8 54	1 12				11			10 35	11 7	1 55	175
25	F	Birth of John the Baptist	3 46 8	18 23 25	5 5		9 44	1 42				12			11 37		2 8	176
26	S	Geo. IV. died, 1830	3 46 8	18 23 23	6 5		10 36	2 19				13			0 5	0 3	2 21	177
27	S	4TH S. AFT. TRIN.	3 46 8	18 23 21	7 4		11 31	3 5				14			0 52	1 15	2 33	178
28	M	Q. Victoria c. 1838	3 47 8	18 23 19	7 57		Morning.	3 58				15			1 39	2 0	2 46	179
29	Tu	<i>St. Peter</i>	3 47 8	18 23 16	8 42		0 27	5 0				16			2 20	2 43	2 58	180
30	W	$\alpha$ Lyrae Souths at 11h. 58m. P.M., 77 deg. high	3 48 8	18 23 13	9 21		1 23	6 9				17			3 5	3 25	3 10	181

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## JUNE.

**THE MOON** rises before midnight between the 1st and the 4th, and after midnight, and before sunrise from the 5th to the 12th. She sets before midnight till the 20th. On the 1st and 2nd, she is in Aquila; on the 3rd and 4th, in Aquarius. On the 6th, she rises nearly under the western pair of stars forming the square of Pegasus, and at 4h. 6m. A.M., she enters her last quarter; on the same day at 11h. P.M., she is on the Equator and moving N., and in the constellation of Pisces. On the 7th, she is under the square of Pegasus, but nearer to the Eastern pair of stars than to the Western. On the 8th and 9th, she is in Pisces; on the 10th, in Aries, on the 11th and 12th, in Taurus. On the 13th, at 0h. 52m. A.M., is New Moon, but without an eclipse, as she is nearly 5° from the line joining the Sun and Earth. On the 14th, she is in Gemini, on the 15th and 16th in Cancer. On the evening of the 16th, her crescent will be seen in the W. after sun-set. From the 17th to the 19th, she is in Leo or Sextans. On the 17th, she is moving towards a point 5° S. of Regulus, which star she will have passed before rising on the 18th; and during the evening she will be moving from the star. On the 20th, at 1h. P.M., she is on the Equator, going southward, and evidently directing her course some degs. N. of Spica Virginis. From the 20th to the 23rd, she is in Virgo; on the 21st, she is N.W. of Spica Virginis; before sunset on the 23rd, she will have passed it; and during the night she is N.E., and receding from it. On the 24th and 25th, she is in Libra, and directing her course to a point several degs. N. of Antares. On the 26th and 27th, she is in Ophiuchus; on the former day she crosses the W. branch of the Milky Way; and before sunset on the 28th., she will have passed the E. branch; being on the 28th and 29th, in Aquila. On the 28th, at 1h. 23m. P.M., she will be full, but without eclipse, as she is 5° from the line joining the Sun and the Earth. About midnight on the 29th, she is under the three stars in Aquila, but at a considerable distance from them; and on the last day she is in Aquarius.

**MERCURY**, from the 1st to the 11th, is in the constellation of Taurus; from the 11th to the 25th, in that of Gemini, and on the latter day passes into Cancer.

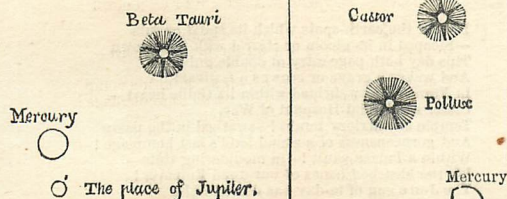
On the 1st, he sets at 7h. 43m. P.M., at the N.W. by N. point of the horizon, before the Sun sets. On the 4th, he sets at the same time as the Sun; on the 6th, he sets at 8h. 25m. P.M., being 16m. after the Sun has set, and from this time to the end of the month he is favourably situated for observation after sunset, particularly from the 20th. On the 11th, he sets at 9h. 2m. P.M.; on the 16th, at 9h. 28m. P.M.; on the 21st, at 9h. 42m. P.M.; and on the 26th, at 9h. 56m. P.M. Between the 7th and 22nd, he sets midway between N.W. by N., and the N.W.; and after the 22nd, near the N.W. by N.

He souths on the 1st, at 11h. 48m. A.M., at an altitude of 60°; on the 15th, at 0h. 54m., at an altitude of 64°; and on the last day at 1h. 46m. A.M., at an altitude of 59°.

On the 6th, he is 4° S.S.W. of Beta Tauri. On the 7th day, he is 4° S. of the same star. On the 8th, he is 4° S.E. of that star. On the 9th, 10th, and 11th, he is near to Jupiter, being N.W. of him on the 9th; about 1½° N. of him on the 10th; and N.E. of him on the 11th, and nearly in the centre of the Milky Way. On the 10th he is also in a line joining the Pole Star and Alpha Orionis, being 17° N. of the latter star, and 7° E. of Beta Tauri; his course being towards Castor and Pollux. On the 20th, Mercury, Castor and Pollux, form a small triangle, the Planet occupying the S.W. angle, and distant 8° from Castor, and 7° from Pollux. On the 22nd, he is 8° due S. of Castor; on the 24th, he is 4° due S. of Pollux.—During the remainder of the month he is moving eastward from those stars; and at the end he is 13° S.S.E. of Pollux.

RELATIVE SITUATION OF BETA, TAURI, MERCURY AND JUPITER ON JUNE 9.

RELATIVE SITUATION OF CASTOR, POLLUX AND MERCURY ON JUNE 21.



Mercury is drawn on a scale of 40" to an inch. The place of Jupiter is only indicated for the same reason as that assigned in last month. By reference to the engraving in the preceding month it will be seen how very nearly Mercury is in the position that Venus was at that time.

Venus will pass from the constellation Gemini into that of Cancer on the 4th, and from the latter into Leo on the 23rd day.

On the 1st, she souths at 2h. 48m. P.M., at the altitude of 62°; and sets at 11h. 10m. P.M. midway between the N.W. by N. and the N.W. From the beginning of the year to this day, Venus has sat later and later every night; after this time

she begins to set earlier. On the 15th, she souths at 3h. 0m. P.M., at the altitude of 60°; and sets at 11h. 0m. P.M. in the N.W. by N. On the last day she souths at 3h. 7m. P.M. at the altitude of 54°; and sets at 10h. 34m. P.M. nearly midway between the W.N.W. and N.W. by N.

On the 1st, she is situated in a line from the Pole Star, passing midway between Castor and Pollux, and she is distant from Castor 8°, and from Pollux 4°. On the 2nd, she is in a line from the Pole Star to Pollux produced 4°, and after this time she is moving from these stars towards Regulus, and during the whole of the remainder of the month she is much brighter than any star near her, and she may be readily distinguished by her brightness. On the 25th, she is in a line joining the Pole Star and Alpha Hydræ, being 26° N. of the latter star, and about 10° W. of Regulus.

Venus is in the neighbourhood of the Moon during the evenings of the 16th and 17th; on the former she is N.E. of the Moon by about 10°; and on the latter she is N.W. at about the same distance.

Mars will be in the constellation of Pisces till the 14th, on which day he passes into that of Cetus.

He rises on the 1st, at the E. by S.; and on the last day near the E. points of the horizon, and between those points during the month. On the 1st, at 1h. 16m. A.M.; on the 15th, at 0h. 38m. A.M.; on the 28th, he rises twice on the same day, viz., at 0h. 2m. A.M., and at 1h. 59m. P.M.; and on the last day he rises at 11h. 54m. P.M. He souths on the 1st and last days at 6h. 46m., and 6h. 5m. A.M., at the altitude of 32°, and 40° respectively.

On the 1st, an isosceles triangle is formed by Mars, Alpha Pegasi, and Gamma Pegasi, (the two southern stars forming the square of Pegasus), the Planet being 22° distant from either star. On the 16th, he is situated in a line joining Alpha Andromedæ and Gamma Pegasi, (the two eastern stars forming the square of Pegasus) being 31° distance from Alpha Andromedæ, and 17° from Gamma Pegasi; after this time the planet continues to move eastward. The Moon is W. of him on the 6th, and E. on the 7th.

**JUPITER**, on the 11th, will pass from the constellation Taurus to that of Gemini. He sets about 4° N. of the N.W. by N. all the month; on the 1st, at 9h. 12m. P.M.; on the 20th, at 8h. 16m. P.M., being very nearly at the same time as the Sun sets; and after this day he sets before the Sun. After the 20th day he rises before the Sun, and by the end of the month, the time of his rising precedes that of the Sun by about half an hour.

He souths on the 1st day at 0h. 58m. A.M.; on the 20th, at noon; and on the last day at 1h. 32m. P.M. During the month he is near the Sun, and this is the worst month during the year for observing him.

**SATURN** rises at about 2° S. of the E. by S. throughout the month. On the 1st day, at 1h. 2m. A.M.; on the 16th, he rises twice on the same day, viz., at 0h. 3m. A.M., and at 1h. 59m. P.M.; and on the last day he rises at 11h. 4m. P.M. He souths at an altitude of 30°; on the 1st day at 6h. 21m. A.M.; and on the last day at 4h. 25m. A.M. His relative position among the stars is nearly the same throughout the month, and he is situated as in May. He is 5° S. of the Moon on the 6th, at 3h. 40m. A.M.

**URANUS** rises at about 1° S. of E. by N.; on the 1st day, at 1h. 53m. A.M.; on the 30th day, he rises twice in the same day, at 0h. 0m. A.M., and again at 1h. 56m. P.M. He souths on the 15th day, at 7h. 34m. A.M., at an altitude of 45°.

**TIMES OF THE SOUTHING, &c. OF THE PRINCIPAL FIXED STARS, WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.**

Star's Names.	Magnitude.	Time of southing during the evening of the 1st day.	Height in degrees above the horizon S (South) N (North)	Setting.	
				Number of hours from southing.	Point of the horizon.
Spica Virginis	1	8 38	28° 3'	5	Near W. by S.
Arcturus	1	9 30	58s	7½	N.W. by W.
α Coronæ Borealis	2	10 49	66s	8½	Near N.W.
α Serpentis	2	10 58	45s	6½	W. by N.
β Scorpi	2	11 18	19s	4½	S.W. by W.
Antares	1	11 41	12s	3½	S.W.

As the stars pass the meridian earlier, on every succeeding evening than they did on the preceding evening, by four minutes nearly. To find the time of passage on any day of any month, it is merely necessary to subtract from the times of passage as inserted in each month for the first day, a portion of time corresponding to the day of the month diminished by one, multiplied by four minutes.

*Example.*—Required the time of Spica Virginis Southing or passing the Meridian on the 11th day of June.

Time of passage on the 1st day from the above table is .. 8 38  
10 Multiplied by 4 is 40; therefore subtract .. .. 40

The difference is the time of Spica Virginis southing on the 11th day nearly .. .. 7 58

### JUPITER'S SATELLITES.

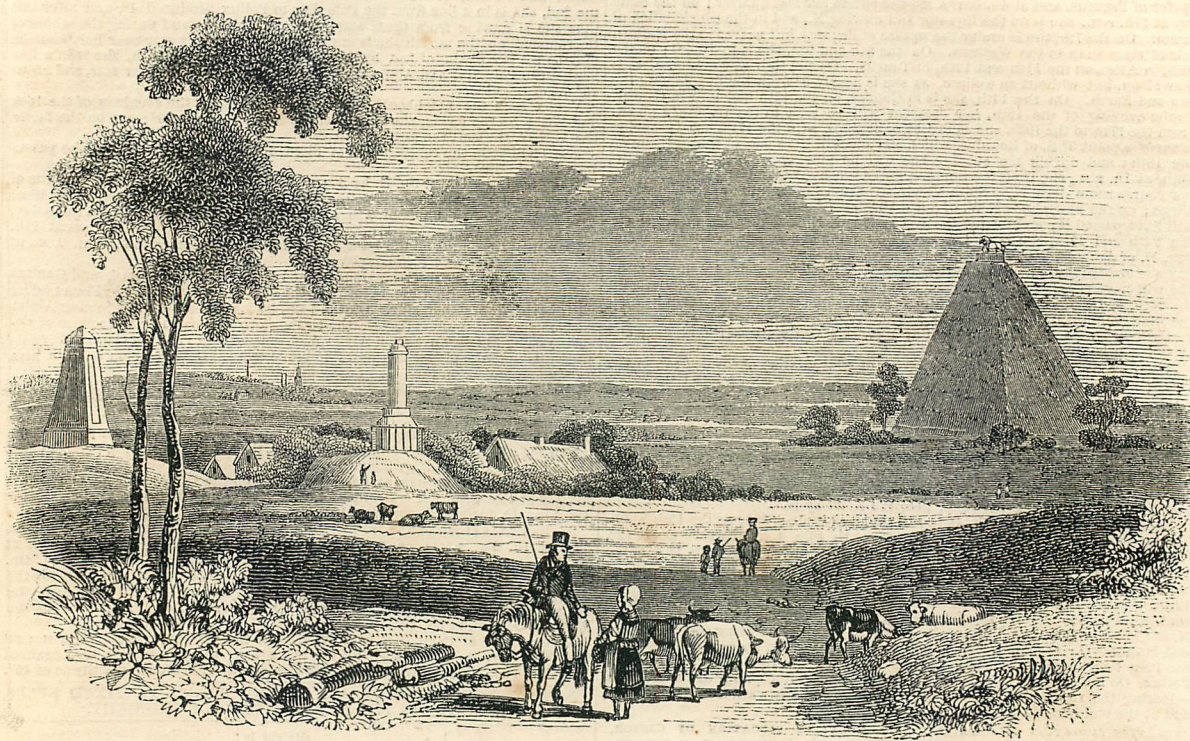
### OCCULTATIONS OF STARS BY THE MOON.

Days of the Month.	Length of Day, or number of hours between Sunrise and Sunset.	Number of hours and minutes the day has increased since the Shortest Day.		Time of Day-break, or beginning of Twilight.	Time of Twilight ending.	JUPITER'S SATELLITES.		OCULTATIONS OF STARS BY THE MOON.				
		Decreased since the Longest Day.				Eclipses of		Names of the Stars.	Magni- tude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.	
		P.	M.									
1	16 13	8	28	No real night, but Constant Twilight.		Are not visible, Jupiter being too near to the Sun.		Rho Sagittarii	5	{	D. 2 H. 0 M. 30 A. M. 1 44 „	Bright Dark
6	16 21	8	36									
11	16 28	8	43									
16	16 32	8	47									
21	16 34	8	49									
26	16 32	0	2									
30	16 30	0	4									

### RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.	Days of the Month.	MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.	
		Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.
LAST QUARTER .. 6D. 4H. 5M. A.M.	1	4h. 16m	21° 29'	7h. 25m	24° 12'	23h. 24m	6° 17'	5h. 35m	23° 7'	22h. 58m	8° 29'	1h. 4m	6° 10'
NEW MOON .. 13 0 52 A.M.	6	5 3	23 47	7 50	23 17	23 37	4 59	5 40	23 10	22 59	8 26	1 5	6 14
FIRST QUARTER .. 20 7 32 P.M.	11	5 50	25 2	8 14	22 6	23 50	3 42	5 45	23 12	22 59	8 25	1 6	6 18
FULL MOON .. 28 1 23 P.M.	16	6 35	25 8	8 37	20 42	0 2	2 25	5 50	23 14	23 0	8 24	1 6	6 21
PERIGEE .. 3 1 A.M.	21	7 16	24 16	9 0	19 6	0 15	1 9	5 55	23 16	23 0	8 24	1 7	6 24
APOGEE .. 20 4 P.M.	26	7 52	22 40	9 22	17 19	0 27	0 6N	6 0	23 16	23 0	8 25	1 7	6 27

## June Anniversary.



THE FIELD OF WATERLOO.

## THE DAY OF WATERLOO.

"THE FIGHT AND THE FEAST OF VICTORY."

JUNE 18.

"Waterloo is a substantial and considerable village of clean, good, and respectable houses. St. Jean is two miles beyond, and close to the celebrated field. From old professional, as well as patriotic feeling, I chose Sergeant Cotton, late of the 10th Hussars, as my guide. He is an intelligent, spare, active, good-looking fellow, of fifty-three years of age. It is fanciful to say that the Field of Waterloo seems marked out as the scene of a great action. It is very far from a strong position, though no doubt the best the country afforded. A gently rising ground, not steep enough in any part to prevent a rush of infantry at double quick time, except in the dell on the left of the road, near La Haie Sainte; and along the crest of the hill La Haie Sainte and immortal Hougomont! That a general should have calmly and confidently waited on such a spot to receive the attack of a superior army, commanded by the Conqueror of Europe, the great master and regenerator of modern warfare, amazingly out-numbering him in cavalry—for which arm the ground was most favourable—and with 90 guns more than his own!—that he should have done this, is, perhaps, the greatest compliment that has ever yet been paid to any army."

Even on this day  
There's not a corn-ear yellowing in the Sun  
—That spreads its summer lustre on the plains  
Where Death *once* gleaned his harvest,—that shall start  
To the old battle's echo!

Not a voice  
From the far vineyards and tree-blossom'd farms,  
That cleaves unto it its Past of blood and fire!

Not in the sweet dreams of the Maiden's love,  
Or still contentment of the Peasant's thought,  
Stirs the fear-presence of the perish'd War!

With them,—and by the soil on which it grew—  
The Earth that 'neath its desolation groaned—  
The Sky that saw its crimson tinge the cloud—  
The storm that swept that mighty Park of Battle,  
And winged its triumph-thunders round the world  
Is as a vanished terror—smoothed away  
By its dark tracery, from the human heart,  
By forty smiling years of peaceful love!

So Waterloo is silent in the sun!  
Its fields have scarce a memory! but there be  
Some deep-stirred haunts of Earth—some well-marked spots,  
Into whose heart the very word is graved  
With axe of diamond and with sword of fire!

Europe hath murmured blessings to that name  
Which Peace hath sanctified; and as each year  
Brings round the day which saw its glory dawn  
May murmur blessings still; nay, all the world  
May see it flash across its memory,  
One of the meteor-marvels of its life!

But for the earth-spots which its spirit haunts  
—Steeped in its gloom or starr'd with its renown  
This day hath pageantry of double guise,  
And wakes a grave or crowns a festival!  
In France—deep shrouded within its Gallic heart—  
Under a splendid Hospital of War,  
Temple of warriors' tombs!—swathed in the pomp  
And gorgeousness of a proud land's last homage!  
Within a Palace vault!—in mouldering state—  
Lie the bleached bones of our dead Emperor!  
The June sun of to-day has darted light  
Electric through the regions of the dead;  
And all Napoleon's earth-quaked spirit there  
Is gazing on flame lettered Waterloo!

There is a roaring tempest in that tomb!  
The blood is as a river on its floor!  
Its marble heart is filled with flame and rage—  
Hoarse thunder booms—and clashed swords blend with shrieks—  
And as the vision swells its terrible strife,  
The grave seemed shattered by that burst of "Charge!"  
Till there,—amid the ruins of his war,  
The madden'd Conqueror—conquered—shouts to die!

'Tis vain! the thought escaped his soul on earth,  
And now it finds its palsy in the tomb!

His spirit may not die, but it lives back  
Into its own survivance—to the time  
When the chain'd Exile wore away a life  
In sad inglorious fretfulness of heart,  
Weaving a crust of canker for his soul,  
Until the lonely island where he stood  
Felt the calm death wind winging to her shores,  
And, in her pity, grew the willow-mourner  
That wept so long above Napoleon's clay!

So in that Isle, which was the grave of Glory,  
And in that pomp-embazoned vault of France,  
Are two dark grieving places of the Earth,  
That cannot bear the light of "Waterloo!"

The third mark'd spot is our immortal England,  
Whose heart,—thrill'd wildly with a nation's joy—  
Leaps to the proud memorials of her fame,  
And in the lap of Peace enshrines the war  
That gave it wings and welcome!

Well, she warms  
Her lusty spirit in this Sun of June,  
That in the dazzle of its glory bathes  
The names of Wellington and Waterloo!

## JUNE.

JUNE is pre-eminently the month for flowers. The wild roses and honeysuckles are abundant in every hedge. In the woods, the butterfly orchis, and numerous other curious nearly allied plants, are to be found; while the beautiful bee orchis hangs from the limestone rocks its curiously shaped flowers, quivering in the air, as if they were really the insects they represent. In boggy places, the butterwort is found, with its oily leaves covered with the remains of very small flies; and the sun-dew, with its curious leaves looking as if fringed with gems. In wetter places will be found the water violet, with its pretty pink flowers and finely-cut leaves; the forget-me-not; and the brooklime (*Veronica Beccabunga*), which generally produces its clusters of bright blue flowers on the banks of a clear, shallow brook. Near the sea, the yellow horned-poppy has a peculiarly brilliant appearance, and its sea-green leaves look as though they had actually taken their colour from the spray which washes over them. The sea milkwort, the sea spurge, and the eryngo or sea holly, are all beautiful plants which adorn the sea shore during the month of June.

In this month, a great number of the ferns unroll their fronds; for it must be observed that ferns do not form buds like other plants, but that their leaves, or fronds, as they are properly called, when they first appear, are rolled up in a circular form, and gradually unfold. It was formerly believed that fern seed, if gathered on the eve of the Festival of St. John the Baptist (the 23rd of June), would make the bearer invisible. Ferns have no visible flowers, and their seeds are produced in clusters, called sori, on the backs of the leaves. Each sorus contains numerous thecae, and each theca encloses almost innumerable spores or seeds. The curious plant called the flowering fern (*Osmunda regalis*), has the sori, which are of a deep brown, growing on a branched spike which rises above the fronds like a spike of flowers. There are numerous other kinds of fern, all remarkable for some interesting peculiarity, but which it would take too much space to enumerate here. When ferns grow in great masses, as in Epping Forest, and Hagley Park, in Worcestershire, the effect is magnificent, particularly when the fronds are waved to and fro by the wind. The poppies are all in flower at this season, particularly the large white, or opium-bearing poppy. When the petals of the flowers of this species fall, the seed vessel will be found green and

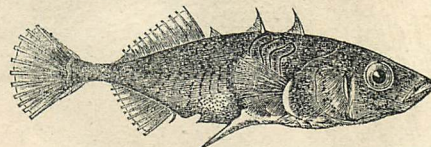


MALE FERN.

succulent; and, if it is slightly wounded, or rather scarred with a sharp knife, a milky juice will appear; and, if this is exposed to the sun till it hardens, it becomes opium. The white water lily, which has been called the queen of British flowers, is in perfection in this month. The leaves of this plant are large and handsome, and they float on the surface of the water. The flowers, if closely examined, will be found curious in a botanical point of view, from the manner in which the calyx, the corolla, and the petal-like stamens seem to change into each other. The common yellow flag (*Iris Pseud-acorus*) is a splendid marsh plant at this season, and it was formerly believed always to unfold its blossoms on the 1st of June. Various other kinds of iris ornament the gardens. The genus iris is also curious to a botanist, from the stigma of each flower spreading out into three fringed petals, under each of which a stamen lies hidden. The grasses are very interesting in June, and may be studied at this season to the best advantage. Those who have not studied the subject will be surprised to hear that there are nearly fifteen hundred different species of grasses, and that, of these, above three hundred kinds are common in pasture fields in Great Britain. Of course, the chief difference between these kinds consists in the seeds; but, when closely examined, even the leaves will be found decidedly distinct. The most beautiful of the British grasses are the feather grass (*Stipa pennata*), and the quaking grass (*Brizia media*). St. John's wort (*Hypericum calycinum*) was said always to be in flower on St. John's Day, the 24th of June. The scarlet pimpernel or shepherd's weather-glass is in flower at this season, and it takes its popular English name from the fact which has been often observed, that, if its flowers will not unfold in the morning, there is sure to be rain in the course of the day.

In this month, comparatively few birds are heard in song, for, as in most cases the young birds are hatched, the parents, both male and female, are too much occupied in attending to them to sing. In fact, the song of birds seems generally confined to the periods of pairing and hatching, as, during the latter time, the male sings as if to amuse the female while on the nest. Many birds may, however, be seen in this month; and the habits of the shrike, or butcher-bird, are so curious, as to make it well deserving attention. It is a migratory bird, seldom appearing in England till the latter end of May, and it departs early in September. It is a solitary bird, being generally found alone; and when it has killed its prey, which consists of small birds, insects, and sometimes field mice, it fixes the creature it has killed to a thorn, and then tears it in pieces with its bill. "When coming upon a bird or mouse which it has pursued for some distance, it settles its feet at the moment it strikes with its bill the cranium of the object pursued." "All small birds," says Mr. Knapp, "have an antipathy to the shrike, betray anger, and utter the moan of danger when it approaches their nests. I have often heard this signal of distress, and, cautiously approaching to learn the cause, have frequently found that this butcher-bird occasioned it. They will mob, attack, and drive it away, as they do the owl, as if fully acquainted with its plundering propensities." White mentions that a friend of his, who shot a butcher-bird, told him "that it might easily have escaped his notice, had not the outcries and chattering of the whitethroats and other small birds drawn his

attention to the bush where it was." The redstart and the pied fly-catcher are sometimes heard singing in June; but the latter seldom longer than the first week of that month. Some birds build their nests in this month, and the commonest of these is the goldfinch. This bird makes a very elegant nest, composed of various kinds of grass, mosses, and lichens, all carefully woven together, so that not a single projecting particle is seen. The nest is then lined with wool, hair covered with thistle down, or with the cotton that falls from the catkins of the willow and the poplar. "The goldfinch," says Rennie, "is more neat in the execution of its felting than the chaffinch, though I have seen several of the nests not look so pretty; for the goldfinch's is rendered more formal, and less richly varied in colouring, by the anxiety which the bird displays not to have a single leaf of moss or lichen projecting, all being smoothly felted with wool, which, in some measure, conceals the moss; whereas, in the chaffinch's nest, the lichen usually conceals the wool. In other respects, the two nests are much the same, as well as the eggs; those of the goldfinch having their white ground more commonly tinged with blue, and having fewer and rather brighter spots, which are dark in the centre, and shade off into a thinly spread purple colour."



THE STICKLEBACK.

The curious little fish called the sticklebacks (*Gasterosteus aculeatus*) are found in great abundance in June. They are small, and, if put in a glass, extremely beautiful, the back being red, and the sides of a brilliant green, shading into a silvery white. The fins on each side of the head are very large, and as fine as gossamer; they are in perpetual motion, and extremely beautiful. The male sticklebacks are very pugnacious; and, if several are put together in one glass, the strongest will kill the others. When kept singly, and supplied daily with fresh water, with duck weed or some kind of conferva, they will live a long time. A lady at Godalming kept one for several months, and she was very much amused to find that, whenever the sun was hot, he took the trouble to spread out the conferva with which he was furnished in the shape of an umbrella, near the surface of the water, so as to afford him shade, letting it sink to the bottom again when the sun went in. A battle was once observed between the pupa of a dragon fly and a stickleback. There was first an extraordinary motion in the water of the pond, as though a stone had been thrown into it; but on closer observation the pupa and the stickleback were observed struggling with each other, like two foes grappling in mortal combat. They alternately rose to the surface, and sank again, till at last the poor fish was overpowered, and the pupa of the dragon fly, having dragged it into the soft mud near the bank, was soon perceived sucking its blood. When sticklebacks fight with each other they use the sharp spines on their backs and the lower part of their bodies as weapons; and the bodies of those that are killed, if taken out and examined, will generally be found to be dreadfully lacerated. It is only the male sticklebacks that fight, and when one has gained the victory his body appears to swell out, the lower part becomes of a brilliant crimson, the upper part of as bright a green, and the two gossamer fins on the sides quiver as if the fish were in a transport of delight.

Vipers are frequently found in woods during this month; and though their bite is venomous, it is said to be cured by taking abundance of common salad oil, and rubbing the wounded part with it. There are several kinds; but, as they differ only in colour, they are supposed to be only varieties of one species. Vipers will bear a long fast, and one is said to have been kept in a box six months without food. It is asserted, indeed, that they will never eat while in confinement.

Among the insects of this month may be mentioned the green forester moth (*Two stultices*). The wings are semi-transparent, and the larger pair are of a brilliant green. The body is of a bright copper-colour; and the hind wings are brown. The moth is a very pretty one, and has a metallic lustre in the sun. It is common in many parts of England, but has never been found in Scotland. Its caterpillar looks like a greenish brown maggot; and its chrysalis is enclosed in a close cocoon, which is generally found fastened by a number of loose silky threads to the leaves of the common thrift. The caterpillars of the vapourer and tussock moths are generally found at this season. That of the vapourer moth is very handsome; it is dark grey, spotted with red on the sides, with a black mark down the back, having three reddish spots on it towards the tail, and four tufts of yellowish hair towards the head, and long fine black hairs growing from the sides of the head, the sides of the body, and over the tail. The female vapourer has very slight wings, and is incapable of flight; but the male is a dark brown moth. The female lays her eggs on the outside of the cocoon in which she was inclosed in her pupa state. The caterpillar of the tussock moth is larger than the vapourer; the dorsal tufts are black, and the other hairs yellow. The male moth is of a bluish grey; and the female is furnished with wings. The gipsy moth, which has also a caterpillar furnished with tufts of hair, is often seen in this month. The male is brown, and the female whitish—both marked with dark brown wavy lines. The caterpillars of the tiger moth are hairy, but the hairs are not disposed in tufts. One of these, which is extremely common, is called, in Scotland, the hairy worm, and it is very abundant at this season. The large blue butterfly (*Polyonotus Arion*) is often seen in this month, and in the beginning of July, on the cliffs at Dover, and in various other places. The female has a broad blackish margin to her wings; and both species have the underside of their wings of a pale buff, so that when they sit with their wings closed, they look like another species. The Scotch argus (*P. Araxes*) is another species of the same genus, which has the underside of the wings buff, marked with white and yellow spots; the upper surface is brown.

The stag-beetle is one of the largest and strongest of the British insects: when put under a glass of moderate size, it will raise it with its horns. It is generally found in the daytime, concealed in the stump of an oak or an elm tree; but in the evening it begins to fly about with a peculiar humming noise. The larva is a large thick grub of a very pale yellow. It is generally found coiled up, but when stretched out to its full length, it measures nearly four inches. It is said to remain five or six years in a larva state, and when it has attained its full size, it forms a sort of cup or oval saucer in the earth, by moistening it with its glutinous saliva, and working it till the inside is quite smooth and hard. The grub then lays itself down in the cavity it has formed, and remains about a month in a torpid state, after which it changes its skin and becomes a pupa or chrysalis, rolling itself up in a ball of earth larger than a hen's egg, in which it lies about three months, becoming a perfect insect about the last week in June or the beginning of July. In its larva state it feeds upon decayed wood; but the perfect insect is said not only to feed on wood, but to attack the leaves of the oak.



NATIONAL SPORT, AFRICA—  
LION HUNT.

M	W	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER			EQUA- TION OF TIME.	Day of the Year.
			Rises.	Sets.	DECLI- NATION North.	Rises. Afternoon	Souths.	Sets. Morning	Before Sunrise. O'Clock	After Sunset. O'Clock	At LONDON BRIDGE	Morning.	Afternoon	Add.		
1	Th	Sirius souths with the Sun; on August 11th it rises with the Sun. On this account the time between July 3rd and August 11th is called Dog Days	3 49 8	17 23	9	9 54	3 12	8 39				3 45	4 5	3 22	182	
2	F		3 49 8	17 23	5	10 25	3 12	8 39				4 30	4 50	3 33	183	
3	S		3 50 8	16 23	1	10 54	4 5	9 57				5 13	5 40	3 44	184	
4	S	5TH SUNDAY AFT. TRINITY	3 51 8	16 22	56	11 21	4 58	11 15				6 0	6 25	3 55	185	
5	M	Antares souths at 9h. 23m. P.M., 12 deg. high	3 52 8	16 22	51	11 51	5 49	Afternoon				6 55	7 20	4 6	186	
6	Tu	St. Thomas	3 53 8	15 22	45	Morning.	6 42	1 47				7 52	8 20	4 17	187	
7	W	Becket	3 54 8	15 22	39	0 21	7 34	2 59				8 57	9 30	4 27	188	
8	Th	Bourbons restored, 1815	3 55 8	14 22	32	0 55	8 28	4 10				10 5	10 40	4 36	189	
9	F		3 56 8	14 22	26	1 37	9 23	5 15				11 16	11 50	4 46	190	
10	S		3 57 8	13 22	18	2 23	10 17	6 12					0 22	4 55	191	
11	S	6TH SUNDAY AFT. TRINITY	3 58 8	13 22	11	3 17	11 11	6 55				0 50	1 15	5 3	192	
12	M	Lyne souths at 11h. 7m. P.M., 77 deg. high	3 59 8	12 22	3	4 15	Afternoon	7 43				1 43	2 5	5 12	193	
13	Tu	Ophiuchi souths at 9h. 58m	4 0 8	11 21	54	5 18	0 53	8 18				2 30	3 50	5 19	194	
14	W	St. Swithin's Day	4 1 8	10 21	46	6 23	1 41	8 48				3 10	3 30	5 27	195	
15	Th	Beginning of the Hegira, or Mohammedan era in the year 622	4 2 8	9 21	36	7 27	2 26	9 14				3 47	4 5	5 33	196	
16	F		4 3 8	8 21	27	8 31	3 10	9 39				4 23	4 40	5 40	197	
17	S	7TH S. AFT. TRIN.	4 4 8	7 21	17	9 33	3 53	10 2				4 58	5 15	5 45	198	
18	S	The Sun rises N.E. by N., and sets N.W. by W.	4 5 8	6 21	7	10 37	4 35	10 25				5 35	5 50	5 51	199	
19	M	St. Margaret	4 6 8	5 20	56	11 38	5 17	10 47				6 10	6 30	5 55	200	
20	Tu	Aquile souths at 11h. 46m. P.M.	4 8 8	4 20	45	Afternoon	6 1	11 13				6 50	7 10	5 59	201	
21	W	Mary Magdalen	4 9 8	3 20	34	1 42	6 46	11 42				7 34	7 55	6 3	202	
22	Th	Sun enters Leo	4 10 8	2 20	22	2 48	7 34	Morning.				8 30	9 7	6 6	203	
23	F	Aquile souths at 11h. 35m. P.M., 47 deg. high	4 11 8	0 20	11	3 50	8 24	0 15				9 40	10 13	6 8	204	
24	S		4 12 7	58 19	58	4 49	9 18	0 55				10 47	11 20	6 10	205	
25	S	8TH SUNDAY AFT. TRINITY—St. James	4 14 7	56 19	46	5 48	10 13	1 46				11 55		6 11	206	
26	M		4 15 7	54 19	33	6 34	11 9	2 43				0 24	0 50	6 12	207	
27	Tu	Revolution in Paris 1830; lasted three days	4 17 7	53 19	19	7 17	Morning.	3 49				1 15	1 40	6 12	208	
28	W		4 19 7	51 19	6	7 54	0 6	5 2				2 3	2 25	6 11	209	
29	Th	Aquile souths at 11h. 11m.	4 21 7	50 18	52	8 27	1 2	6 20				2 50	3 10	6 10	210	
30	F	Aquile souths at 11h. 11m.	4 23 7	49 18	38	8 57	1 58	7 41				3 30	3 50	6 8	211	
31	S	Cygni souths at midnight, 83 deg. high	4 24 7	47 18	23	9 26	2 52	8 59				4 15	4 35	6 6	212	

It was formerly believed, when Sirius or the great Dog Star and the Sun were at or near conjunction, that all sorts of evils took place, since it was said that Sirius made the "sea to boil; wine to become sour; dogs to go mad; and all creatures to languish." These fancies were wrong, and should now be entirely removed. The name of Dog Days is still kept amongst us, but the weather is seldom more sultry during their continuance than during some other parts of summer.

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## JULY.

THE MOON rises before midnight till the 5th, and after midnight from the 6th. She sets before midnight till the 21st, and after midnight from the 22nd. She is in Aquarius on the 1st and 2nd; in Pisces on the 3rd, 4th, and 5th; on the 6th, she is directly S. of the square of Pegasus. On the 6th and 7th she is in Aries, directing her course under the Pleiades, and towards the Hyades and Aldebaran. On the morning of the 9th, she will be a few degrees W. of Aldebaran; before the morning of the 10th, she will have passed it, and will be several degrees E. of that star, and passing above Rigel. During the 8th, 9th, and 10th, she is in Taurus; on the 11th and 12th in Gemini; on the 12th at 11h. 24m. in the morning is New Moon, but without an eclipse, as she is 5 degrees from the line joining the Sun and the Earth. On the 13th she is in Cancer; on the 14th, 15th, 16th and 17th in Leo. After sun-set each evening of these days her crescent will be seen N. of W. On the 15th she is near Regulus. On the 17th, at 11h. p.m. she is on the Equator, moving S. From the 18th to the 20th, she is in Virgo, being near Spica Virginis on the 19th. On the 20th at 0h. 52m. p.m. she enters her last quarter. On the 21st and 22nd she is in Libra. On the 23rd and 24th she is in Ophiuchus, the star Antares being a few degrees S.W. of her on the 23d day; on the 24th, she is between the two portions of the Milky Way. On the 25th, 26th, and 27th she is in Aquila. On the 27th at 10h. 8m. p.m. is Full Moon, but without an eclipse, as she is then 4 degrees from the line joining the Sun and the Earth. On the 28th and 29th she is in Aquarius, and in Pisces afterwards to the end of the month. On the 31st, at 1h. p.m. she is on the Equator and moving N.

MERCURY will be in the constellation of Cancer till the 9th day, and in that of Leo after that time.

On the 1st he sets at 9h. 43m. p.m., being 1h. 26m. after the Sun has set. On the 6th he sets at 9h. 37m. p.m.; on the 11th, at 9h. 21m. p.m., the Sun having set 1h. 8m. before; therefore, from the 1st to the 11th, the Planet is very favourably situated for observation, and during this time he sets at the N.W. by N. point of the horizon. On the 16th he sets at 9h. 3m. p.m., near the W.N.W.; on the 21st at 8h. 41m. p.m.; on the 26th at 8h. 17m. p.m. midway between W.N.W. and W. by N. And on the last day the Sun sets only 5 minutes before this Planet.

He souths on the 1st at 1h. 48m. p.m., at an altitude of 59°; on the 9th at 1h. 55m. p.m., at an altitude of 55°; and on the last day at 0h. 51m. p.m., at an altitude of 48°.

He is moving Eastward among the stars till the 24th, and Westward after that time.

During the first part of the month there are no bright stars near him; and he is moving from Castor and Pollux; on the 11th he is 24° S.E. of the latter star.

VENUS will be in the constellation Leo till the 29th, and in that of Virgo after that time.

Between the 1st and the 15th, she souths at 3h. 8m. p.m. at altitudes decreasing from 54° to 48°. From the beginning of the year till this time the planet has southed later and later day by day; after the 15th she souths earlier and earlier day by day, and on the last day she souths at 2h. 59m. p.m., and at an altitude of 40°.

On the 1st day she sets at 10h. 31m. p.m. near the W.N.W.; on the 11th at 10h. 9m., midway between W.N.W. and W. by N.; on the 20th at 9h. 45m. at the W. by N., and on the last day at 9h. 12m. near the W. On July 5, during the evening, she is situated very near to Regulus, being about 1 degree N. of the star, and after this day she passes eastward from it. On the 7th she is 2° E. and of the same altitude as that star. After this time she is moving towards Spica Virginis. On the 19th she is in the line produced from the Pole Star through Alpha Ursa Majoris (one of the pointers, and the nearest to the Pole Star.) On the last day she is in a line joining the Pole Star and Beta Leonis, and at the distance of 15° South of this star. Venus is near the Moon during the evening of the 16th, being N.W. of her by 5°.

MARS will be in the constellation Cetus till the 8th, and from that time to the end of the month he is skirting the constellations of Pisces and Cetus, being alternately in the one and in the other.

He rises near the E. at the beginning; near the E. by N. at the end, and between those points during the month; on the first day, at 11h. 51m., and on the last day, at 10h. 27m. p.m. Southing on the same days at 6h. 3m. and 5h. 11. p.m. respectively, on the former day at the altitude of 40° and on the latter of 46°.

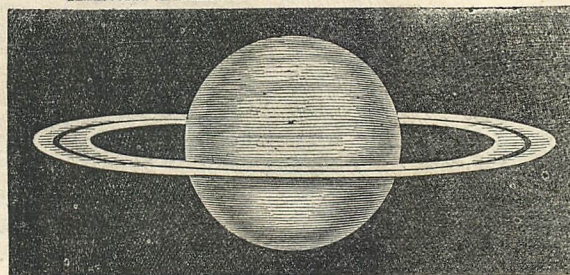
On the first, Mars, Gamma Pegasi and Alpha Arietis form a triangle, the Planet occupying the lower angle; being 18° from the former and 31° from the latter star. On the 23rd, Mars, Alpha Arietis and Alpha Ceti form a triangle, of which the planet is situated in the W. angle; being 18° S.W. of Alpha Arietis, and 20° E. of Alpha Ceti. During this month the Planet shines more brilliantly than any star near him.

JUPITER will be in the constellation of Gemini. He rises about 4° N. of the N.E. by N. point of the horizon; on the 1st at 3h. 15m. a.m.; and on the last day at 1h. 47m. a.m. He souths at an altitude of 62°; on the 1st at 1h. 30m. a.m.; and on the last day at 10h. 0m. a.m.

On July 1, he is situated in a line drawn from Aldebaran to 1° below Pollux; he is 26° distance from Aldebaran; 18° from Castor and 19° from Pollux. He is moving towards Castor and Pollux all the month, and on the last day he is 14° distance from both stars.

SATURN rises at about the same point of the horizon, and souths at the same altitude as in May. On the 1st he rises at 11h. 1m. p.m. and souths at 4h. 21m. a.m. on the second; on the last day he rises at 9h. 0m. p.m. and souths on the following morning at 2h. 20m. a.m. He is stationary among the stars till the 20th day; after that time he moves slowly westward, and he is situated as in last month.

### TELESCOPIC APPEARANCE OF SATURN DURING THE YEAR 1847.



Scale 15" to an inch.

URANUS rises near E. by N. at 11h. 52m. p.m. on the 1st, and at 9h. 54m. on the last day. He souths at 6h. 33m. a.m., and 4h. 36m. a.m. on the same days, at the same altitude as in the last month. During the month he is nearly stationary among the stars.

### TIMES OF THE SOUTHING, &c., OF THE PRINCIPAL FIXED STARS WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Stars' Names.	Magnitude.	Time of southing during the evening of the 1st. day.	Height in degrees above the horizon. S (South) N (North)	Setting.	
				Num. of hours from southing.	Point of the horizon.
Alpha Corona Borealis	2	8 50	66°s	8½	N.W.
Alpha Serpentis	2	8 59	45s	6½	W. by N.
Beta Scorpii	2	9 18	19s	4½	S.W. by W.
Antares	1	9 42	13s	3½	S.W.
Beta Draconis	2	10 49	89s	Never Sets	
Alpha Ophiuchi	2	10 50	51s	7½	W.N.W.
Alpha Lyrae	1	11 54	77s	Never Sets	

### POSITION OF THE CONSTELLATIONS RISING, ON THE MERIDIAN, AND SETTING ON THE 1st. DAY AT 10h. P.M.

Constellations Rising.	Constellations on the Meridian	Constellations Setting.
Medusa's head in Perseus in N.N.E.	Auriga 20° above N. horizon	The heads of Gemini in N.W. by N.
Triangulum in N.E. by N.	Camelopardalus 30° above N. horizon	Cancer in N.W.
The N. fish of Pisces in N.E.	Polaris	The fore-legs of Leo in W.N.W.
The Wing of Pegasus in E.	The body of Draco, between the Pole Star and the Zenith	Sextans in W.
The shoulders of Aquarius E. by S.	Hercules, 60° above S. horizon	The wings of Corvus in S.W. by W.
The head of Capricornus in S.E. by E.	Ophiuchus, 50° above S. horizon	Centaurus in S.W. by S.
The body of Sagittarius in S.E. by S.	The tail of Scorpio, 20° above S. horizon.	Lupus in S. by W.

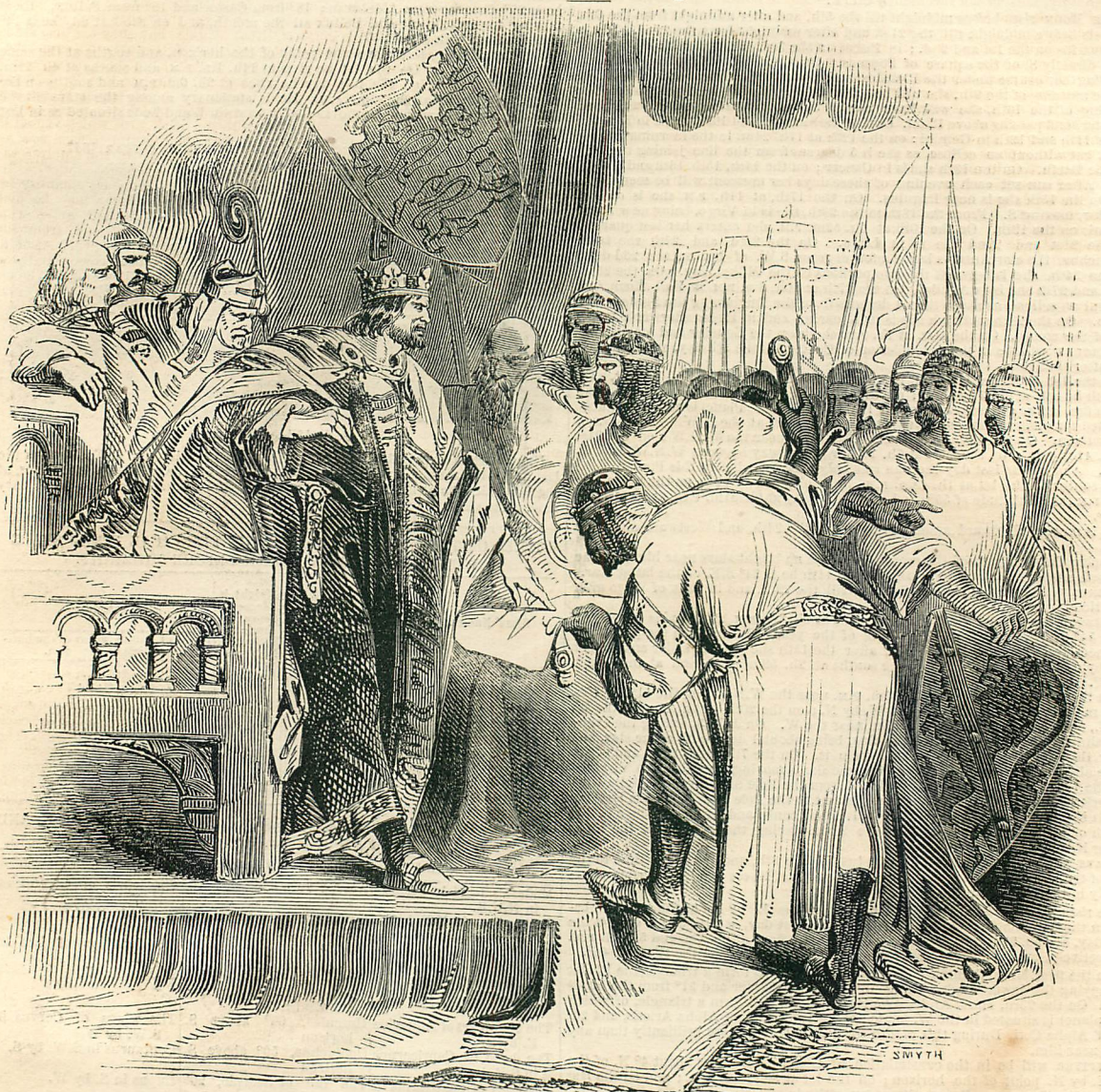
### OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
z 1 Aquarii	6	D. H. M. 1 1 50 A. M. 2 25 "	Bright Dark
63 Tauri	6	9 1 41 " 2 30 "	Bright Dark

### RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth, in each Luvation.				Days of the Month.	RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.													
					MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.			
					Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.		
LAST QUARTER	..	5d. 8h. 42m. A.M.		1	8h. 23m	20° 36'	9h. 43m	15° 23'	0h. 39m	1° 19'	6h. 5m.	23° 17'	23h. 0m.	8° 27'	1h. 8m	6° 29m		
NEW MOON	..	12 11 38 A.M.		6	8 49	18 16	10 4	13 19	0 51	2 31	6 10	23 16	22 59	8 30	1 8	6 31		
FIRST QUARTER	..	20 0 52 P.M.		11	9 8	15 54	10 23	11 9	1 3	3 40	6 15	23 15	22 59	8 34	1 8	6 32		
FULL MOON	..	27 10 8 P.M.		16	9 24	13 41	10 42	8 54	1 14	4 46	6 20	23 14	22 58	8 39	1 8	6 33		
PERIGEE	..	3 1 A.M.		21	9 32	11 51	11 0	6 36	1 26	5 50	6 25	23 11	22 58	8 44	1 8	6 33		
APOGEE	..	18 10 A.M.		26	9 32	10 39	11 17	4 17	1 36	6 51	6 29	23 9	22 57	8 50	1 8	6 33		
PERIGEE	..	30 9 A.M.																

## July Anniversary.



KING JOHN SIGNING MAGNA CHARTA.

## SIGNING OF MAGNA CHARTA.

THE 2nd of July was the day appointed to be observed as a national holiday, for thanksgiving and joy, by those noble barons who so resolutely and successfully defended the rights of the people, against the oppression, duplicity, and immorality of the universally hated John; and forced him to sign and concede on the 15th day of June, 1215, "this great charter of English liberties."

King John and the Barons met according to a previous arrangement in a meadow between Staines and Windsor, adjacent to the Thames, called Runnymede, and this meadow, which has for ages been regarded as the place where the great charter was signed, or rather sealed, is in the parish of Egham. It has been stated, however, that although the conferences between the opposite parties may have been held at Runnymede, yet the actual scene of the ratification of the covenant was an island in the Thames, still known by the name of Charter Island, which is not within Surrey, but belongs to the parish of Wraysbury, in Buckinghamshire. The fallacy of this assertion is easily proved, for Runnymede is expressly named in the King's subscription to the charter itself, as the place where it was signed. The words are—"in *Prato quod vocatur Runnymede in Windleshor' t' Stanes*," as may be seen in an original copy of the charter, preserved among the archives of Lincoln Cathedral. The "Carta de Forseta," which was granted by John on the same day, was also signed at Runnymede. The ceremony took place, not in any house, but in the open field; the assembly continued for some days; but it was no sooner dissolved than the King threw off the mask, which, with consummate hypocrisy, he had worn during the proceedings. Lingard says, that "in a paroxysm of rage, he cursed the day of his birth, gnashed his teeth, rolled his eyes, gnawed sticks and straws, and acted all the freaks of a madman."

This charter is often regarded as the constitutional basis of English liberties; but, in many of its provisions, it seems to have been only a declaration of rights which had been enjoyed in England before the Conquest, and which are said to have been granted by King Henry I. on his accession. However, if it did not properly found the liberties which the English nation enjoys, or if it were not the original of those privileges and franchises which the barons (or the chief tenants of

the crown, for the names here are equivalent), ecclesiastical persons, citizens, burgesses, and merchants enjoy, it recalled into existence, it defined, it settled them, it formed in its written state a document to which appeal might be made, under whose protection any person having interest in it might find shelter; and which served, as it were, a portion of the common law of the land, to guide the judges to the decision they pronounced in all questions between the King and any portion of the people.

The names of the chiefs who gained this grand concession from the King are preserved in the charter itself. The first name is that of Robert Fitz Walter, who belonged to the great family of Clare. Next to him come Eustace de Vesci, Richard de Percy, Robert de Roos, Peter de Brus, Nicholas de Stuteville, Socier de Queneil, Earl of Winchester, the Earls of Clare, Essex, and Norfolk, William de Mowbray, Robert de Vere, Tulk Fitz Warine, William de Montacute, William de Beauchamp, and many others of families long after famous in English history, the progenitors of the ancient baronial houses of England.

Magna Charta has been painted in a great number of forms; there are fac-similes of a copy of it which was made at the time, and still exists in the British Museum, and another preserved at Lincoln, already mentioned. Of this charter the late Board of Commissioners of the Public Records caused to be engraved and published an exact fac-simile, and it will be found printed and translated in the first volume of "The Statutes of the Realm." Long after the charter was granted, to keep the rights thus guaranteed fully in the eyes of the people, a copy was sent to every cathedral church, and read publicly twice a year.

Blackstone gives a satisfactory abridgement of the charter in his "Commentaries;" we have, besides, an express treatise on it. It was called Magna Charta, or the Great Charter, not on account of its extent, for a single page of parchment, measuring 20½ inches by 14½, contains the whole of its privileges; but because it recorded so many ancient rights of the nation, and abolished so many unjust oppressions. The finest and most perfect original of the charter is that at Lincoln. For popular gratification, the charter has been lithographed, and published at a moderate price.

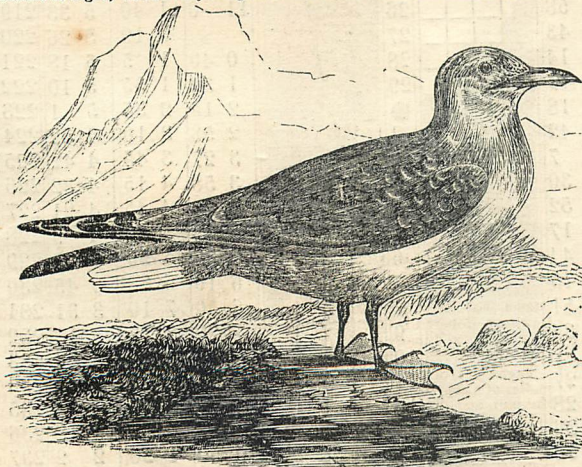
JULY.

In July, most of the succulent plants come into flower, such as the various kinds of Sedum, and house-leek; also, the snapdragon and various kinds of Labiatae, and nearly all the Compositae. It has been observed that the flowers in this month are generally yellow or red. In July is frequently found the curious parasite called broom-rape, growing from the roots of the beech and other trees. The stem of this plant is purple, and the flowers are lightish brown; it has also light brown scales, which serve instead of leaves. Another curious parasitical plant, which is found at this season, is the Cuscuta or dodder, which twines itself round the stems of clover, heath, and other low-growing plants, so as completely to hide them. Nettles are very abundant at this season; and, as some persons have been known to express a wonder of what use such ugly stinging plants can be, it may be interesting to mention, that upwards of fifty species of caterpillar are known to feed upon the nettle, and to prefer its leaves to those of any other plant.

Sea-weeds are, however, perhaps the most interesting plants at this season, for those who happen to be staying near the sea-coast, as most of them are now in fructification. Several kinds are only found in the south and south-west of England, and the south of Ireland; but others are common in every part of Great Britain. One of the most abundant of the latter kind is the bladder fucus, or sea-wrack. The frond, or leaf, of this plant is often three or four feet long; its colour is a dark olive-green, and it is furnished with a strong midrib, occasionally branched, and numerous air-vessels, about the size of a large pea, generally arranged in pairs, opposite each other, on each side of the midrib, which explode when the frond is clapped between the hands. The sporules, or seeds, are contained in pine-shaped receptacles, which are formed at the extremity of the fronds, and which, when ripe, are of an orange colour. Large masses of this weed are thrown on shore in stormy weather. It is used for manure, and its ashes form the alkaline substance called kelp, which was formerly so much used in the manufactures of soap and glass. Now, however, the duty having been removed from barilla and salt, kelp is but little used. In Sweden, this weed is boiled, and used for feeding pigs. There are many other kinds of fucus, particularly that called buck's horn, which is very common in Scotland and the north of England, but which is seldom seen in the south; and the cut-leaved fucus, which has notched leaves and tubercles instead of air vessels. Another very beautiful sea-weed which is common in the south of England, and particularly in the Isle of Wight, is the feathered fucus (*Pliota plumosa*). The fronds are tufted, and of a beautiful pale crimson when young, becoming of a dark brown when older. Another curious sea-weed, which has only been found in Great Britain in Freshwater Bay, in the Isle of Wight, is the cartilaginous *Gelidium*. The fronds are beautifully pinnated, and of a reddish hue. The plants when boiled form a stiff jelly, and it is said to be from a plant of this genus that the Indian swallow makes those nests which are used in China for making soup. The laver, which is so frequently eaten as a kind of vegetable, is a kind of sea-weed, growing in broad leaf-like fronds, on rocks or stones on the coast. It is pickled with salt, and preserved in jars; and, when brought to table, it is stewed, and eaten with oil and lemon-juice. There are two distinct kinds, the purple and the green, and several species of each. Numerous other sea-weeds are found upon the British coast, such as the chequered *Enteromorpha*, the fronds of which form dense tufts of a yellowish green; and, though each is not thicker than a bristle, yet, when examined under a microscope, it will be found so beautifully reticulated as to appear like lattice-work. The different kinds of *Elodeocarpus* are found on various parts of the coast, forming tufts of green filaments. Other tufted sea-weeds belong to the genus *Polysiphonia*, but they are generally dark red, or purple.

Very few birds sing in the month of July; and the cuckoos and many other migratory birds leave England in that month. Young broods of swallows, martins, and some other birds that breed in England, are generally seen at this season. On warm summer evenings, the goatsucker may be often seen darting about in search of insects, and hovering round goats while they are feeding.

The goatsucker (*Caprimulgus europæus*, Lin.) is a very curious bird. The month is remarkably large, and it is furnished with long hairs or bristles, which, it is supposed, are intended to prevent the small butterflies and other winged insects, on which it feeds, from escaping when once caught. On the middle claw of each foot, is a curious kind of comb, with which it is supposed the bird arranges or disentangles the fringe of its beak. This bird is known by a great many names; it is called the nightjar, from a peculiar jarring noise, not unlike the sound of a large spinning-wheel, which it makes when it flies, and which, of course, appears loudest at night, when everything around is still. It is also called the fern-owl,



THE GULL.

because it generally makes its nest among ferns; and, as it feeds on nocturnal insects, it flies at night, like the owl. Its popular name of goatsucker arises from an absurd supposition that it sucks goats, and that the animals which have been sucked by it are liable to a disease called puckeridge. The fact is, that this disease arises from a species of fly, which lays its eggs in the skin of goats, which produce the maggots that are found in the animals affected with the disease; and, as the bird hovers round the goats to catch the insects which are about to lay their eggs, it is more likely to prevent the disease than to occasion it.

Young wild ducks and teals are often found in this month; and owls are seen flitting about towards the evening. In this month gulls are very abundant on the sea-coast, and they often build on the ledge of a rock so close to the water, that it seems wonderful they can keep their eggs from falling in. They are very abundant in the north of Great Britain, but they are also found on the southern coast during the summer months, particularly between the Needle Rocks and Freshwater Gate, in the Isle of Wight. There are several kinds of gull, which are distinguished by their feathers being marked in different places with black. There is a gull near Bonchurch, in the Isle of Wight, which was brought up there nearly thirty years ago, and which, for many years, used to leave its host's every season to pair with the wild birds which visited the coast every spring; but it always returned after the breeding season was over, and would suffer itself to be played with, and fondled by the children as before, though it would not suffer itself to be touched by strangers.

Insects are now particularly abundant, and an immense quantity of moths and butterflies are seen flying about. Amongst the moths may be mentioned the lappet moth, the caterpillar of which is very large, and is remarkable for having the sides of its body furnished with fleshy appendages, from whence it has received the name of lappit. It is dark grey, or brownish, and has numerous tufts of hairs. The perfect insect is of a reddish brown; and when it is at rest it folds its wings so curiously that it looks like a dead leaf. The chrysalis looks like the hairy seed vessel of a plant.



THE CATERPILLAR OF THE HAWK MOTH.

The moth of the lobster caterpillar appears in this month. It is of a pale brown, with a lozenge-shaped dark brown mark on the head. The caterpillar is red, with very long fore-legs, and the tail curved, so as to bear considerable resemblance to a lobster. The moth of the zig-zag caterpillar appears in this month; it is small, and brown, and not remarkable for its beauty. The caterpillar is very curious. The long straight caterpillars which resemble twigs in their appearance are often found in this month; and that of the swallow-tailed moth (*Oncopeltus Sambucaria*) is exactly like a brown twig. The moth is of a very pale yellow, and the chrysalis is enclosed in a cocoon of leaves hung from a branch by silken threads. The caterpillar of the brimstone moth (*Rumia Crataegata*) has another of these twig-like caterpillars, but it is generally of an iron-grey, sometimes varying to brown; and the moth is of a brimstone yellow.



THE CATERPILLAR OF THE PUG MOTH.

Other caterpillars of less common insects have the same twig-like appearance. The sphinx caterpillars take their name from the curious attitude of the caterpillar, which resembles that of the Egyptian Sphinx. The perfect insect of these caterpillars is the hawk moth, of which there are many species, all of which are very handsome, both in the larva and the perfect state. In this month is often found the caterpillar of the puss moth, a very curious creature, with a forked tail, and a very curious face, which is of a reddish purple, with yellowish lips, and jet black eyes. The under part of the body is green, and the upper part of a very dark purple with a white margin; the tail is black. It is generally found feeding on the willow.

A very curious little beetle is often seen on the surface of ponds about this season. Hundreds of these little creatures appear together darting and whirling about on the surface of the water, their shining wing cases and rapid motions positively dazzling the eyes. These little creatures are the whirlwig beetles; but the country people call them water fleas. When they are frightened, they dart down into the water, carrying with them a small bubble of air, which looks like a drop of quicksilver attached to the body of the insect when it is seen clinging to an aquatic plant at the bottom of the water. When these beetles are seen in the water, they are always clinging to some aquatic plant, as their bodies are said to be so exceedingly light that they would rise to the surface if they did not take hold of something to keep them down. When caught, they emit a milky fluid, which has a very disagreeable smell, and which remains on the fingers a long time in spite of every effort to remove it. The eggs of these beetles are laid on the leaves of aquatic plants, and they look like small bugles. The grubs look almost like centipedes; they are of a greyish white with long slender bodies, and six legs. Towards the end of July or the beginning of August they climb up the leaves of reeds, or any robust growing plants which they find near the water, to undergo their transformations. Here each grub spins for itself a substance resembling grey paper, of which it forms its chrysalis. In this state it remains about a month, and the moment it is released, it springs into the water and darts about on its surface with the other insects.

NATIONAL SPORT, INDIA—  
TIGER HUNT.

M D	W D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER			EQUA- TION OF TIME.	Day of the Year
			Rises.	Sets.	DECLINA- TION NORTH.	Rises.	Souths.	Sets.	Before Sunrise.	O'Clock.	After Sunset.	At London Bridge	At	Equa- TION OF TIME.		
			H. M.	H. M.	Deg. Min.	H. M.	H. M.	H. M.	2h. 3h. 4h.	Moons Age.	8h. 9h. 10h.	Morning.	Afternoon	M. S.		
1	S	Lammas Day—	4 25	7 46	18 8	9 55	Morning.	9 17		20		4 55	5 20	6 3	213	
2	M	9th SUNDAY AFTER TRINITY	4 27	7 44	17 53	10 25	4 38	10 33		21		5 45	6 10	5 59	214	
3	Tu	Antares souths at 7h. 32m.	4 28	7 43	17 38	11 0	5 31			22		6 35	7 0	5 55	215	
4	W	α Herculis souths at 8h. 16m. P.M.	4 29	7 41	17 22	11 37	6 25	2 1		23		7 25	7 55	5 51	216	
5	Th	Oyster season beg.	4 31	7 40	17 6	Morning.	7 19	3 6		24		8 25	9 5	5 45	217	
6	F	Transfiguration of our Lord	4 33	7 38	16 50	0 23	8 13	4 4		25		9 40	10 20	5 39	218	
7	S		4 35	7 36	16 33	1 13	9 6	4 58		26		11 0	11 40	5 33	219	
8	S	10TH SUN. AFT.	4 36	7 34	16 16	2 8	9 58	5 43		27		0 10	0 10	5 26	220	
9	M	TRINITY	4 38	7 32	15 59	3 7	10 48	6 14		28		0 40	1 5	5 18	221	
10	Tu	St. Lawrence	4 39	7 31	15 42	4 12	11 36	6 47		29		1 32	1 55	5 10	222	
11	W	Dog Days end	4 41	7 29	15 24	5 15	Afternoon.	7 18		1		2 15	2 35	5 1	223	
12	Th	Grouse Shoot. beg.	4 43	7 27	15 6	6 19	1 6	7 42		2		2 53	3 10	4 52	224	
13	F	Birth of Dowager Queen Adelaide, 1792	4 44	7 25	15 48	7 21	1 49	8 7		3		3 27	3 45	4 42	225	
14	S		4 45	7 23	14 30	8 24	2 32	8 30		4		3 58	4 15	4 32	226	
15	S	11TH S. AFT. TRI.	4 46	7 21	14 11	9 26	3 14	8 52		5		4 30	4 45	4 21	227	
16	M	Sun rises E.N.E. and sets W.N.W.	4 48	7 19	13 53	10 29	3 57	9 17		6		5 2	5 20	4 9	228	
17	Tu	Duchess of Kent born, 1786	4 49	7 17	13 34	11 31	4 41	9 44		7		5 35	5 50	3 57	229	
18	W		4 51	7 15	13 14	Afternoon.	5 27	10 15		8		6 10	6 30	3 45	230	
19	Th	α Lyrae souths at 8h. 41m. P.M., 77 deg. high	4 52	7 13	12 55	1 35	6 15	10 51		9		6 50	7 10	3 31	231	
20	F	ζ Aquilæ souths at 9h. 3m.	4 54	7 11	12 35	2 34	7 5	11 34		10		7 38	8 10	3 18	232	
21	S	δ Aquilæ souths at 9h. 18m.	4 55	7 9	12 16	3 29	7 58	Morning.		11		8 45	9 30	3 4	233	
22	S	12TH S. AFT. TRI.	4 57	7 7	11 56	4 31	8 53	0 27		12		10 5	10 40	2 49	234	
23	M	Sun enters Virgo	4 59	7 5	11 35	5 7	9 49	1 28		13		11 23	At Midnight.	2 34	235	
24	Tu	St. Bartholomew	5 07	3 11	15 5	5 46	10 46	2 36		14		0 25	0 25	2 18	236	
25	W	α Aquilæ Souths at 9h. 23m. P.M., 47 deg. high.	5 27	1 10	54	6 22	11 43	3 52		15		0 50	1 20	2 2	237	
26	Th	Pr. Albert b. 1819	5 36	59	10 34	6 56	Morning.	5 15		16		1 40	2 5	1 46	238	
27	F	α Aquarii souths at 11h. 36m.	5 56	57	10 13	7 25	0 39	6 35		17		2 28	2 50	1 29	239	
28	S	St. Augustine	5 76	55	9 52	7 56	1 34	7 56		18		3 10	3 35	1 12	240	
29	S	13TH S. AFT. TRI.	5 86	53	9 30	8 27	2 29	9 16		19		3 55	4 20	0 55	241	
30	M	St. John the Baptist be- headed. A Romish festival	5 106	51	9 9	9 1	3 24	10 34		20		4 40	5 0	0 37	242	
31	Tu	Cygni souths at 9h. 58m. P.M., 83 deg. high	5 126	48	8 48	9 38	4 19	11 38				5 20	5 45	0 19	243	

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## AUGUST.

THE MOON rises before midnight till the 4th, and after midnight from the 5th. She sets during the day and before midnight till the 20th, and after midnight from that day; she rises after Sun-set from the 27th to the end of the month. On the 1st and 2nd she is in Pisces; on the 1st a large triangle is formed by the Moon, Alpha Arietis, and Alpha Ceti, and her course is directed between these stars, but much nearer the latter than the former; on the 2nd she will be approaching the line joining them, and she is directing her course to Aldebaran. On the 3rd and 4th she is in Aries, and on the latter day at 1h. 59m. P.M. she enters her 3rd quarter; from the 4th to the 6th in Taurus. On the 5th she is seen S.E. of the Pleiades, and approaching the Hyades and Aldebaran, which she passes before sun-rise on the 8th, and her crescent will be seen several degrees E. of them. On the 7th, at time of rising, she is in the Milky Way and in Orion. On the 8th she is in Gemini; on the 9th she is in Gemini at the time of rising, but very soon passes into Cancer, and she is in Leo from the 11th to the 13th. On the 11th day is New Moon, but without an eclipse as she is 3 degrees distant from the line joining the Sun and Earth. On the 14th she is on the Equator at 7h. A.M. and moving Southward; from the 14th to the 16th she is in Virgo, and her narrow crescent will be seen S. of W. after Sun-set. On the 15th she is directing her course evidently a few degrees above Spica Virginis; before setting on the 16th she will have passed this star, so that she is W. of it during the time she is visible. On the 17th and 18th she is in Libra, directing her course above Antares, which, on the former evening, is considerably S.E. of her, and on the latter at a much less distance. On the 19th she is in Scorpio, and early in the evening about 12° nearer the Pole Star than Antares; but the latter sets some time before the Moon; at 5h. 1m. in the morning of this day she enters her last quarter. On the 20th in Ophiuchus; from the 21st to the 23rd she is in Aquila, passing at a considerable distance S. of the three characteristic stars of this constellation. From the 24th to the 26th she is in Aquarius; on the latter day at 6h. 9m. A.M. she is full, but without an eclipse; on the 27th at 10h. P.M. she is on the Equator, and moving N.; from the 27th to the 29th she is in Pisces; in Aries on the 30th, and in Taurus on the 31st, moving towards Aldebaran.

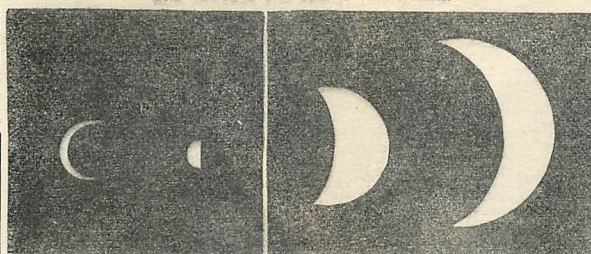
MERCURY will be in the constellation of Leo throughout the month. The Sun rises before him till the 10th, and after that time the rising of the Planet precedes that of the Sun. On the 11th the Planet rises at 4h. 28m. A.M.; on the 16th at 3h. 52m. A.M.; on the 21st day at 3h. 26m. A.M.; on the 26th at 3h. 20m. A.M.; at near the E.N.E. point of the horizon. From the 20th to the 31st, the rising of the Planet precedes that of the Sun by more than an hour, and therefore this time is favourable for observing him.

He souths on the 1st at 0h. 45m. P.M. at an altitude of 48°; and on the last day at 10h. 58m. A.M. at an altitude of 53°. He is moving Westward among the stars till the 17th, and Eastward afterwards.

On the 20th he is 21° S.E. of Pollux; and 23° N.E. of Procyon (the little Dog Star). He is moving from those stars towards Regulus, and on the 29th he is in the line joining the Pole Star and Alpha Hydrea, at the distance of 24° N. of the latter star, and he is 10° W. of Regulus.

VENUS will be in the constellation of Virgo throughout the month. On the 1st she souths at 2h. 59m. at the altitude of 40°, and sets at 9h. 11m. P.M. near the W.; on the 4th day she sets nearly due W. On the 13th day she sets at 8h. 20m. P.M. near the W. by S., and on the last day she souths at 2h. 11m. P.M. at the altitude of 34°, and sets at 7h. 17m. P.M. midway between the W. by S. and W.S.W.

TELESCOPIC APPEARANCE OF MERCURY AND VENUS AT THE BEGINNING, AND TOWARDS THE END OF THE MONTH.



MERCURY.

Scale 40" to an inch.

VENUS.

On the 1st, 2nd, and 3rd she is situated nearly in a line joining the Pole Star and Beta Leonis, and at the distance of 15° S. of this star; and after these days she is moving towards Spica Virginis all the month; and at the end of the month she is about 7° W. of that star. She is brighter than any object near her during the month; and being at her greatest brilliancy on the 28th day at 1h. 17m. A.M., she will be a very conspicuous and splendid object. On the 14th she will be near the Moon, being about 3° S.E. of her.

MARS will be in the constellation Cetus during the month. He rises at the beginning of the month near E. by N.; about the middle of the month midway between E. by N. and E.N.E., and near the latter point at the end. On the 1st at 10h. 25m. P.M.; on the last day at 8h. 53m. P.M. He souths on the same days at 5h. 10m. A.M., and 4h. 4m. A.M. respectively, at the altitude of 46° on the 1st, and of 51° on the last day.

On the 6th he is situated in an imaginary line drawn from the Pole Star to Alpha Arietis, and produced to 14°; on the 27th day he is in a line drawn from the Pole Star to Gamma Ceti, at the distance of 9° N. of the latter star, and he is at the same time 10° from Alpha Ceti. During this month he increases very much in brightness, and he becomes a conspicuous object both from his brilliancy and the redness of his colour.

JUPITER will be in the constellation of Gemini. He rises about 3° N. of N.E. by N.; on the 1st at 1h. 44m. A.M., and on the last day at 0h. 14m. A.M. On the 1st he souths at 9h. 57m. A.M., and on the last day at 8h. 25m. A.M., at an altitude of 61°.

During the first few days he is situated in a line joining the Pole Star and Sirius (the great Dog Star), and at the distance of 40° N. of this star; he is moving, as in the last month, towards Castor and Pollux, and at the end of the month he is about 9° W. of Pollux and 10° W. of Castor.

SATURN rises during the former part of the month at about 3° S. of E. by S., and during the latter part at 4° S. of the same point of the horizon; on the 1st day at 8h. 57m. P.M.; and on the last day at 6h. 57m. P.M. He souths at an altitude of 29° on the 1st day at 2h. 20m. A.M.; and on the last day at 0h. 14m. A.M. His motion is slowly Westward among the stars; at about the middle of the month he is situated about 23° from Alpha Pegasi, and 21° from Fomalhaut.

URANUS rises near E. by N. at 9h. 51m. P.M. on the 1st day; and at 7h. 52m. P.M. on the last day. He souths at 3h. 36m. A.M. on the 15th day, at an altitude of 45°.

### TIMES OF THE SOUTHING, &c. OF THE PRINCIPAL FIXED STARS, WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Stars' Names.	Magnitude.	Time of southing during the evening of the 1st day.	Height in degrees above the horizon S (South) N (North).	Setting.	
				Num. of hours from southing.	Point of the horizon.
Beta Draconis	2	8 47	89°N	Never Sets	Near W. by N.
Alpha Ophiuchi	2	8 48	51s	7½	
Alpha Lyrae	1	9 52	77	Never Sets	W.N.W.
Alpha Aquilae	1	11 3	47	6½	
Alpha Cygni	1	11 56	83	Never Sets	

### POSITION OF THE CONSTELLATION'S RISING ON THE MERIDIAN, AND SETTING ON THE 1st DAY AT 10h. P.M.

Constellations Rising.	Constellations on the Meridian	Constellations Setting
Auriga in N.N.E.	The Lynx 15° to 20° above the N. horizon.	The hind legs of the Lynx N.N.W.
The feet of Perseus in N.E. by N.	The head and neck of Camelopardalus 40° above the N. horizon	Leo Minor N.W. by N.
Musca in N.E. by E.	Polaris	The rump of Leo N.W. by W.
The head of Aries in N.E.	A part of Draco, between the Pole Star and the Zenith.	The shoulders of Virgo W. by N.
The legs of Aquarius in S.E.	Lyra 75° above the S. horizon	Libra 15° above the S.W.
The hips of Sagittarius in S. by E.	The head of Sagittarius 15° above the S. horizon	Scorpio S.W. by S.

### JUPITER'S SATELLITES.

Days of the Month.	Length of Day, or number of hours between Sun-rise and Sunset.	Number of hours and minutes the day has decreased since the Longest Day.	Time of Daybreak, or beginning of Twilight.	Time of Twilight Ending.
			H. M.	H. M.
1	15 21	1 13	1 28 A.M.	10 43 P.M.
5	15 5	1 29	1 48 "	10 23 "
11	14 48	1 46	2 6 "	10 4 "
16	14 31	2 3	2 22 "	9 45 "
21	14 14	2 20	2 37 "	9 27 "
26	13 56	2 38	2 51 "	9 11 "
31	13 36	2 58	3 3 "	8 57 "

Eclipses of		3d. Sat.	
1st. Sat.	Emersion.	Emersion.	4th. Sat.
D. H. M.	D. H. M.	D. H. M.	
20 2 32 A.M.		28 1 34 A.M.	
No Eclipse of the 2nd Satellite is visible during the month.			
31 3 57 A.M. Immersion. This is the 1st Eclipse of the 4th Satellite, visible in England since November 1844			

### OCCULTATIONS OF STARS BY THE MOON.

Names of the Stars.	Magni-tude.	Times of disappearance and reappearance of the Star.	At the dark or bright limb of the Moon.
z 2Aquarii	6	D. M. H. 24 8 10 P. M. 9 3 "	Dark Bright The Moon nearly full; the Star disappears on the W. side about 30° from the highest point of the Moon
θ Aquarii	5	26 5 10 A. M. The Moon is below the star when the star emerges	

### TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

Days of the Month.	MERCURY.				VENUS.				MARS.				JUPITER.				SATURN.				URANUS.			
	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination North.
LAST QUARTER ..	3d. 1h. 59m. P.M.																							
NEW MOON ..	11 0 28 A.M.																							
FIRST QUARTER ..	19 5 1 A.M.																							
FULL MOON ..	16 6 9 A.M.																							
APOGEE ..	15 3 A.M.																							
PERIGEE ..	27 AT NOON.																							
	1	9h.23m	10° 25'	11h.37m	1° 29'N	1h.49m	7° 59'	6h.35m	23° 5'	22h.56m	8° 59'	1h.8m	6° 33'											
	6	9 9	11 18	11 52	0 49s	1 59	8 52	6 39	23 2	22 55	9 6	1 8	6 32											
	11	8 55	12 56	12 6	3 3	2 8	9 41	6 44	22 58	22 53	9 14	1 8	6 30											
	16	8 47	14 41	12 19	5 13	2 17	10 27	6 48	22 53	22 52	9 23	1 8	6 28											
	21	8 41	15 58	12 30	7 15	2 25	11 8	6 52	22 48	22 51	9 32	1 7	6 26											
	26	9 7	16 47	12 40	9 7	2 33	11 45	6 56	22 44	22 50	9 31	1 7	6 23											

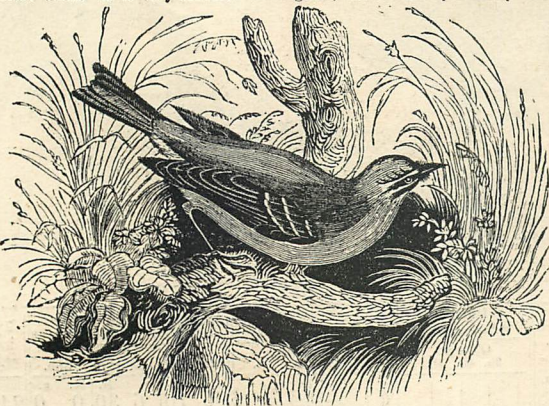


QUEEN PHILIPPA INTERCEDING FOR THE BURGHESES OF CALAIS.—(SEE NEXT PAGE.)

## AUGUST.

In this month several water-plants are in flower, particularly the beautiful water pepper (*Polygonum amphibium*). This plant grows in the water, though its terminal spikes of rosy flowers, and occasionally its long lanceolate leaves, rise above the surface, and at a little distance have the appearance of an island. The flowering rush (*Butomus umbellatus*) has also pink flowers, but it has decidedly the appearance of a water-plant; as have the bullrush and the reed-mace or cat's-tail. The dark brown club-like head of the latter plant is, in fact, a mass of female flowers, which, when ripe, become a mass of downy seeds. The yellow flowers which appear above this club are male flowers, and they wither before the seeds ripen. The white water-lily is also still found occasionally, and the yellow water-lily, or brandy bottle, as it is called from its peculiar smell. The arrow-head, with its light purple flowers; the dark purple flowers of the French willow herb, and those of the purple loose strife; and the frog-bit, with its white flowers, are all highly ornamental. In this month several of the tree lichens begin to make their appearance, particularly those growing upon the oak, some of the handsomest of which are those called Ramalina and Usnea. Some of the latter hang down from the trunks of old oaks like hair. Another very curious lichen is that called oak lungs or hazel rag (*Sticta pulmonaria*). The thallus, or leafy part of this plant, is deeply pitted, so as to afford some resemblance to the human lungs; and hence it was supposed to be highly efficacious in curing consumption. It is, in fact, useful in all diseases of the lungs, as its medicinal properties are like those of the Iceland moss. The cup-moss is another curious lichen frequently found at this season. It is common on heaths, moors, and in dry woods, in every part of the kingdom; and, when in fructification, the cups are tipped with brown in the common species, but, in some of the other kinds, the seed-vessels are of a brilliant scarlet, and the stalks are of a greyish green. Several of the sedges are in flower at this season; and, in the gardens, the white and yellow lilies are in all their beauty. On the commons, the heath is in full flower; and when rushes were used for covering the floors, it was in this month that they were cut.

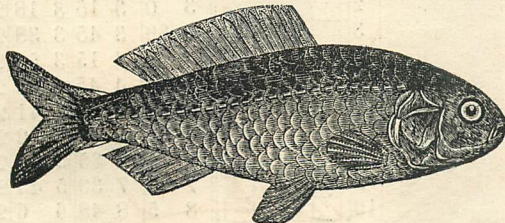
The birds in this month are more silent than in any other month in the year, but young broods of goldfinches, chaffinches and starlings, are seen crowding together. At this season, also, is occasionally seen the curious little bird called the fire-crested wren. It is very common in Belgium, but it is comparatively rare in



THE FIRE-CRESTED WREN.

Great Britain; though, no doubt, it is frequently mistaken for the golden-crested wren, to which it bears a considerable resemblance, though, when closely examined, it may be easily distinguished by the two white streaks near its eyes. It hangs its nest on the branch of a tree, and lays five eggs of a pale flesh-colour, marked with small red spots at the larger end.

The common grouse, or moor-fowl (*Tetrao scoticus*), are only found on uncultivated wastes covered with heath, on high ground. They never resort to woods, but, according to Rennie, "confine themselves wholly to the open moors—building their nests—if a few withered stems placed carelessly together, deserve that name—in a tuft of heath; they feed on mountain and bog berries, and, in defect of these, on the tops of the heath." The female lays from eight to fourteen eggs; and the young, which keep with the parent birds till towards winter, are called a pack, or brood. Grouse shooting commences on the 12th of August.



THE GOLD FISH.

Though gold fish are not natives of Great Britain, they are so frequently bred in this country as to render some notice of them interesting. The gold fish is a kind of carp, which was first brought from China to Europe in 1611, though it does not appear to have been introduced into England till nearly a hundred years afterwards. It is a curious fact in the history of the gold fish, that it will bear without injury extremes of heat and cold, as it will live equally well in a tank, in a pine-stove, and in a pond in the open air. Some years since, Professor Host, a well-known naturalist in Vienna, chanced to leave a glass globe containing a gold fish in the window of a room without a fire, during one of the coldest nights of a very severe winter. In the morning he recollected his poor fish, and, examining the glass, he found the water frozen apparently quite hard, and the fish fixed immovably in the centre. Supposing the fish to be dead, he left it in the ice; but, as it was extremely beautiful, he took a friend to look at in the course of the day, when, to his great surprise, he found that the water had thawed naturally, from the room becoming warm by the sun, and that the fish was quite

lively, and swimming about as though nothing had happened. The friend of M. Host was so much struck with this remarkable occurrence, that he tried a similar experiment; but bringing his frozen fish to the stove to hasten its revival, the fish died. It is a well-known fact, that gold fish never breed in clear water; and it has been observed that when they do breed, the young conceal themselves among the roots of plants, in inequalities of banks, or among the faggots which may have been put in for them. A lady who happened to pull up an aquatic plant which had grown on the bank of a pond in which there were some gold fish, was quite astonished to find the roots appear alive; and on examining them, she discovered the movement to be occasioned by a great number of little dark-brown fishes which were sticking to the roots. These little fishes were the fry of the gold carp, which are taught by instinct to conceal themselves from the old fish till the golden hue begins to appear on their sides, which it does when they are about an inch long. It is said that the gold carp devour the fry of other fish, and also their own, if they see them before the golden blotches appear. When it is wished to breed gold fish in clear water in a tank or basin, a few faggots should be thrown into the water; or a sloping bank of gravel should be raised in the tank, the upper part of which is near the surface of the water. This will afford at once a situation for the old fish to deposit their spawn, and a shelter for the young fry. Some persons, when the spawn has been deposited on a faggot, remove the wood to another tank to rear the young; but they always do better, and grow faster, when bred in a pond with an earthy bottom, and in which plants grow naturally. All kinds of carp, in favourable situations, live to a great age; but gold fish can seldom be kept in glasses longer than four or five years, and they scarcely ever grow in such situations. When kept in ponds, on the contrary, they live to a great age, and attain an enormous size. Some that were kept at Seville, were known to be upwards of sixty years of age; and several in England have been known to weigh from three to five pounds. In the year 1846 a disease prevailed among the gold fish, which proved fatal to hundreds. A kind of canthara, nearly allied to the green scum found on stagnant water formed upon the fish, and occasioned their death. This plant, which is called *Achyra prolifera*, consists principally of threads so exceedingly fine as to be imperceptible to the naked eye, but which take root in the body of the fish, as the mistletoe grows on the apple tree, and in time produce a soft downy substance like mould, that first appears on the gills and tail, but gradually covers the whole body of the fish. When this extraordinary disease, if it may be so called, is discovered in its first stages, it is said that it may be stopped by sprinkling salt on the back and sides of the fish; but the application appears to cause intense pain, as the fish, as soon as it feels the salt, darts from one side to the other of the vessel that contains it, and appears to be writhing with agony.

Insects are very numerous in August, and caterpillars of several kinds that appear earlier in the season, are now seen again as if for a second brood. Among these may be mentioned the caterpillars of the cabbage butterfly, which are often found at this season, as if springing from a second brood. The caterpillars are green, with a yellow streak on each side. When young, the colours are pale and indistinct; but when the caterpillar has nearly attained its full growth, both the green and the yellow become dark and decidedly marked, and spotted with black. In August, this caterpillar forms its chrysalis, which is green, with a yellow stripe down the back. When the insect begins to form its chrysalis, it first spins a quantity of white silk, which it attaches to any object it may be near, and then fastens itself to this mass of silk by a strong girth round the centre of the body. As soon as the silk is completed, the insect reposes quietly at full length upon it, "or, rather, its body contracts in length, and becomes thicker, and at length the skin of the fore part of the back bursts, and the head of the chrysalis appears; by continual writhing of the body the slit is enlarged, and the skin pushed backwards beneath the skin of silk, and thrown off at the tail."—(*Humphreys's British Butterflies*.) A beautiful green caterpillar with bands of a darker colour, is also often found at this season. It is the caterpillar of the dot moth (*Manestra persicaria*). The moth flies at night, generally concealing itself during the day, and it is of a dark brown, with a very conspicuous white crescent-like dot on each of the fore wings. A hairy caterpillar is also found belonging to the spotted buffermoth. The caterpillar is brown, and thickly covered with hair, through which may be seen a narrow red line down the back, and some white marks on each side. The moth has a yellow body, and pale buff wings slightly spotted with black. The swallow-tail butterfly is frequently found in this month. The caterpillar is of a fine green, with velvet-black wings, spotted with red. It feeds on umbelliferous plants, particularly on the fennel and the carrot. It has a bright red forked-like projection on the neck near the head, which, when touched, emits a strong-smelling liquid. When this caterpillar has attained its full growth, it makes itself a chrysalis, in the same manner as the caterpillar of the cabbage butterfly does.

## AUGUST ANNIVERSARY.

(See preceding page.)

On Thursday, the 31st of August, five days after the great and ever memorable battle of Crecy, Edward drew up his army before Calais, and began his famous siege of that place, which lasted nearly a year.

As it was a place of incredible strength, he resolved not to throw away the lives of his soldiers in assaults, but to reduce it by famine. He girded it by entrenchments, and built so many wooden houses for the accommodation of his troops, that his encampment looked like a second town growing round the first. At the same time his fleet blockaded the harbour and cut off all communication by sea; the Governor obstinately refusing to capitulate, until reduced to the necessity of eating all their horses, dogs, and other animals, and nothing was left for them but to eat one another. Edward, enraged at their obstinate resistance, refused them any terms, saying that he would have an unconditional surrender. Sir Walter Manny and many barons pleaded for the men of Calais. "I will not be alone against you all," said the King. "Sir Walter, you will tell the captain that six of the notable burgesses must come forth naked in their shirts, with halters round their necks, and the keys of the town and castle in their hands: on these I will do my will, and the rest I will take to my mercy."

Six of the richest and most notable voluntarily offered themselves to save their fellow-citizens. The English barriers were opened, and the six were admitted to the presence of Edward, before whom they prostrated themselves, and presenting the keys, begged for mercy, but the King rejected their prayers, and ordered their heads to be struck off. The barons and knights entreated the King to be merciful, but he would not hear them, and ordered the headman to be summoned. But the Queen of England, who was far advanced in her pregnancy, fell on her knees, and, with tears, said, "Ah! gentle Sire, since I have crossed the sea with great danger, I have never asked anything of you; now I humbly pray for the sake of the son of the Holy Mary, and your love of me, that you will have mercy on these six men." The King looked at her, and was silent awhile; he then said, "Dame, I wish you had been somewhere else; but I cannot refuse you—I put them at your disposal." Philippa caused the halters to be taken off their necks—gave them proper clothes and a good dinner, and then dismissed them with a present of six nobles each. In a few days after this good Queen was delivered of a daughter, whom she called Margaret of Calais.

This occurred on the 3rd of August, 1347, nearly twelve months after the commencement of the siege; and exactly five hundred years have now passed away since this memorable event, so well and beautifully depicted by our Artist in the accompanying Engraving.



NATIONAL SPORT, SOUTH AMERICA—  
WILD HORSE HUNT.

M	D	ANNIVERSARIES, OCCURRENCES, FESTIVALS, &c.	SUN.				MOON.				DURATION OF MOONLIGHT				HIGH WATER				EQUATION OF TIME.	Day of the Year.
			Rises.	Sets.	DECLINATION NORTH.	Deg. Min.	Rises.	Sets.	Sets.	Morning.	Before Sunrise.	After Sunset.	Moons Age.	Moons Age.	Morning.	Afternoon.	At Noon.	Sub.		
1	W	<i>St. Giles</i>	5 13 6	46	8 25		10 22			0 58			22		6 10	6 30		0	0	244
2	Th	Fire of Lond. 1666	5 15 6	44	8 4		11 10			2 0			23		6 57	7 30		0	19	245
3	F	β Aquarii souths at 10h. 34m. P.M.	5 16 6	42	7 42					2 54			24		8 0	8 35		0	38	246
4	S	ε Pegasi souths 10h. 43m. P.M.	5 18 6	40	7 20					3 42			25		9 20	10 0		0	57	247
5	S	14TH S.AFT. TRIN	5 20 6	37	6 58		1 3			4 17			26		10 40	11 20		1	17	248
6	M	The Sun rises near E. by N. and sets near W. by N.	5 21 6	35	6 36		2 3			5 2			27		11 58			1	36	249
7	Tu	<i>St. Eumurchus</i>	5 23 6	32	6 13		3 7			5 21			28		0 24	0 50		1	56	250
8	W	Nativity of the Virgin Mary	5 24 6	29	5 51		4 10			5 48			29		1 15	1 35		2	16	251
9	Th	Fomalhaut souths at 11h. 31m. P.M., 8 deg. high	5 26 6	27	5 28		5 12			6 12			30		1 55	2 10		2	37	252
10	F	α Aquarii souths 10h. 36m. P.M.	5 27 6	25	5 5		6 15			6 35			1		2 29	2 45		2	57	253
11	S	α Aquarii souths 10h. 36m. P.M.	5 29 6	23	4 42		7 17			6 57			2		3 0	3 15		3	18	254
12	S	15TH S.AFT. TRIN.	5 31 6	20	4 20		8 20			7 21			3		3 30	3 45		3	38	255
13	M	ε Pegasi souths 11h. 28m. P.M.	5 32 6	18	3 57		9 21			7 47			4		4 0	4 15		3	59	256
14	Tu	<i>Holy Cross</i>	5 34 6	16	3 34		10 24			8 17			5		4 30	4 45		4	20	257
15	W	<i>Ember Week</i>	5 35 6	14	3 11		11 24			8 50			6		5 0	5 20		4	41	258
16	Th	α Aquarii souths at 8h. 2m. P.M., 47 deg. high	5 37 6	12	2 47					9 30			7		5 35	5 55		5	2	259
17	F	Lambert	5 38 6	9	2 24		1 19			10 16			8		6 15	6 35		5	23	260
18	S	ε Pegasi souths 9h. 48m. P.M.	5 40 6	7	2 1		2 12			11 13			9		7 0	7 30		5	45	261
19	S	16TH S.AFT. TRIN.	5 42 6	5	1 38		2 58			7 35			10		8 5	8 48		6	6	262
20	M	ε Pegasi souths 10h. 37m. P.M.	5 43 6	2	1 14		3 40			0 16			11		9 30	10 10		6	27	263
21	Tu	<i>St. Matthew</i>	5 45 6	0	0 51		4 17			1 27			12		10 35	11 30		6	48	264
22	W	Sun in Virgo	5 47 5	58	0 28		4 50			2 44			13					7	9	265
23	Th	Autumn commen.	5 48 5	56	0 4		5 21			4 3			14		0 29	0 55		7	30	266
24	F	The Sun rises E. and sets W.	5 50 5	54			5 52			5 25			15		1 19	1 40		7	51	267
25	S	Sun in Libra	5 51 5	52	0 43		6 25			6 46			16		2 2	2 25		8	11	268
26	S	17TH S.AFT. TRIN.	5 53 5	50	1 6		6 59			8 8			17		2 47	3 10		8	32	269
27	M	<i>St. Cyprian</i>	5 55 5	47	1 29		7 35			9 26			18		3 32	3 53		8	52	270
28	Tu	Sheriffs sworn	5 56 5	45	1 53		8 18			10 42			19		4 16	4 35		9	12	271
29	W	<i>St. Michael</i>	5 58 5	43	2 16		9 5			11 50			20		5 0	5 20		9	32	272
30	Th	α Cygni souths at 8h. 0m. P.M., 83 deg. high	5 59 5	41	2 39		9 59						21		5 45	6 10		9	52	273

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## SEPTEMBER.

**THE MOON** rises before midnight on the 1st and 2nd, and after midnight from the 3rd. She sets during the day or before midnight before the 18th; from the 19th she sets after midnight, and rises during the afternoons and evenings to the end of the month. On the 1st day she is a little E. of Aldebaran, which, with the Moon, rises in the W.S.W.; on this day at 9h. 14m. she enters her last quarter. On the 2nd she is also in Taurus, and approaching the Milky Way; on the 4th and 5th she is in Gemini; or the latter day she rises W.S.W., nearly under Castor and Pollux, which are a few degrees above the S.W. by W. She is near those stars all the morning, passing between them and Procyon. On the 6th she is in Cancer, and in Leo on the 7th, 8th, and 9th; on the 9th at 3h. 47m. she is new, but without an eclipse, as she is situated 2 degrees from the line joining the Sun and the Earth. On the 10th she is on the Equator at 2h. p.m. and moving S. She is in Virgo from the 10th to the 13th; on the 12th after Sunset her narrow crescent is seen a few degrees above Spica Virginis in the E.N.E. On the 14th she is in Libra; 15th in Scorpio, and the 16th and 17th in Ophiuchus. From the 14th to the 16th she is directing her course towards Antares, which she passes on the morning of the latter day, and during the evening of the 16th it will be some degrees S.W. of the Moon. On the 17th, at 6h. 21m. p.m. she enters her 1st quarter. On the 18th she moves nearly on the boundary of Sagittarius and Aquila, passing on the 19th the three characteristic stars in the latter at a considerable distance below them. On the 20th she is in Capricornus; on the 21st and 22nd in Aquarius, and from the 23rd to the 25th in Pisces. On the 23rd the square of Pegasus is considerably above the Moon. On the 24th, at 9h. a.m., she is on the Equator and moving N. She rises now about 35 minutes later every night, and exhibits the phenomenon of the Harvest Moon, but not in a very striking manner. This Moon rises 8 times after the Full Moon, before midnight, whereas, in March, she rose only twice after the Full Moon, before midnight; this difference arises from the different angles made by the Ecliptic in the east with the horizon in these two months. From the 26th to the 30th the Moon is successively in Aries, Taurus and Gemini. (See occultation of Aldebaran below).

**MERCURY** will pass from the constellation Leo into that of Virgo on the 15th. He rises at 3h. 37m. a.m. at the E.N.E.; on the 6th at 4h. 4m. a.m.; on the 11th at 4h. 38m. a.m.; and at this time precedes the rising of the Sun by 51 minutes; and he is favourably situated for observation; on the 14th he rises E. by N; on the 16th he rises at 5h. 12m; and on the 21st day the Sun and Mercury rise together, and after this time the Sun rises before the Planet.

He souths on the 1st at 1h. 0m. a.m. at the altitude of 52°; on the 15th at 1h. 43m. a.m. at the altitude of 62°; and on the last day at 0h. 20m. p.m. at an altitude of 33°.

During the month he is moving quickly towards the Eastward. On the 4th day he is 1° N. of Regulus; and he is moving E. from that star; on the 11th he is 27° S.E. of it; and at the same time he is 11° S.W. of Beta Leonis; on the 19th he is situated 10° S. of Beta Leonis.

**VENUS** will be in the constellation Virgo all this and next month. On the 1st she souths at 2h. 8m. p.m. at an altitude of 27°; and sets at 7h. 14m. p.m. midway between the W. by S. and W.S.W. points of the horizon. On the 15th she souths at 1h. 17m. at an altitude of 25° and sets at 6h. 7m. p.m. W.S.W. On the last day she souths at noon and sets before the Sun. On October 6th she rises with the Sun, and after that time before him, and she is the morning star.

From the beginning of the year till September 7th the motion of Venus will be Eastward among the stars; between the 7th and the 17th she will be stationary, occupying, during this time, the same relative position among them; after the 17th her apparent motion will be in the contrary direction to that before the 7th; and it will be Westward among the stars.

Between the 1st and the 21st she will be situated about 7° W. of Spica Virginis, and at the end of the month she will be about 12° N. of the same star.

During the evening of the 11th day she will be about 10° S.S.W. of the Moon. Her appearance at the beginning of this month is shown at No. 1. in the accompanying engraving, at the end at No. 2, at the beginning of October at No. 3, and at the end of October at No. 4.

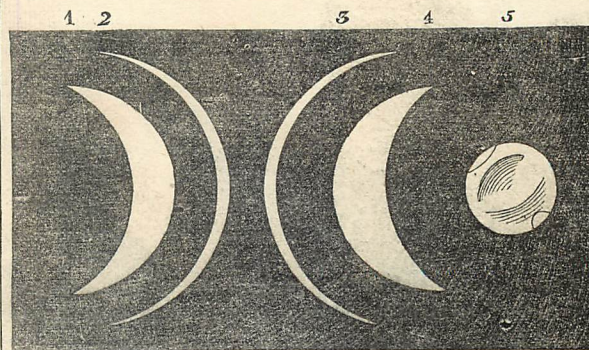
**MARS** will be in the constellation of Aries from the 1st till the end of the year.

He rises near the E.N.E. till the 15th, and at that point after the 15th. On the 1st at 8h. 50m.; on the 15th, at 8h. 1m; and on the last day at 6h. 59m. p.m. He souths at 4h. 1m., at 3h. 19m., and at 2h. 22m. a.m., on the same days, at an altitude of 13° on each day.

From the beginning of the year to the middle of this month this planet has appeared to move Eastward among the stars; from the middle of this month to

the end he appears to be stationary, occupying the same position in the heavens relative to the fixed stars during that time. And generally he is about 10° N. of Alpha Ceti, and about 15° W. of the Pleiades. He will be, however, readily distinguished by his increasing brightness and the redness of his colour. His appearance during this and the following month is represented at No. 5 in the annexed engraving, and by comparison with the drawings of him previously given with this the great change in his apparent size will be evident.

TELESCOPIC APPEARANCES OF VENUS AND MARS DURING THE MONTHS OF SEPTEMBER AND OCTOBER.—(See above.)



Scale 40" to an inch.

**JUPITER** will be in the constellation of Gemini. He rises near the N.E. by N. point of the horizon, on the 1st at 0h. 11m. a.m.; on the 4th he rises twice on the same day, viz., at 0h. 2m. a.m., and again at 1h. 59m. p.m., and on the last day at 10h. 35m. p.m. He souths at an altitude of 61° on the 1st day at 8h. 22m. a.m.; and on the last day at 6h. 45m. a.m. On the 1st day he is situated nearly as on the last day in August; during the month he is moving slowly towards Castor and Pollux, being on the last day 10° due S. of the former, and 6° from the latter. During the month of October he is similarly situated towards these stars.

**SATURN** rises midway between the E. by S. and the E.S.E. on every day. On the 1st day at 6h. 53m. p.m., being only 9 minutes after the sun has set; on the 3rd day the Planet rises at the same time as the Sun sets; and after this time the Planet rises before the Sun sets. On the last day he rises at 4h. 51m. p.m. He souths on the 1st day at 0h. 5m. a.m. And on the last day at 10h. 4m. p.m. His motion among the stars, and his situation, is nearly the same as in last month; the only difference being that he will have receded from Alpha Pegasi and approached Fomalhaut by 1°.

**URANUS** rises at 1° S. of E. by N. throughout the month, at 7h. 48m. p.m. on the 1st, and at 5h. 52. p.m. on the last day. He souths at 1h. 31. a.m. on the 15th.

TIMES OF THE SOUTHING, &c., OF THE PRINCIPAL FIXED STARS WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Stars' Names.	Magnitude.	Time of southing during the evening of the 1st Day.	Height in degrees above the horizon. S (South). N (North).	Setting.	
				Number of hours from southing.	Point of the horizon.
Alpha Lyrae	1	7 50	77°s	Never Sets	Near W. by N.
Alpha Aquila	1	9 1	47s	6½	
Alpha Cygni	1	9 54	83s	Never Sets	Near W. by N.
Alpha Cephei	3	10 33	79N	Never Sets	
Epsilon Pegasi	2	10 54	48s	6½	

## JUPITER'S SATELLITES.

Days of the Month.	Length of Day, or number of hours between Sun-rise and Sunset.	Number of hours and minutes the day has decreased since the Longest Day.	Time of Day-break, or beginning of Twilight.	Time of Twilight ending.	JUPITER'S SATELLITES.						OCCULTATIONS OF STARS BY THE MOON.				
					Eclipses of						Names of the Stars.	Magni-tude.	Times of disappearance and re-appear-ance of the Stars.	At the dark or bright limit of the Moon.	
					1st. Sat.			2nd. Sat.							
					Immersion.			Immersion.							
					D.	H.	M.	D.	H.	M.					
1	H. M.	H. M.	H. M.	H. M.	D.	H.	M.	D.	H.	M.					
6	13 33	3 1	3 6A.M.	8 53P.M.	12	2	41 A.M.	10	1	56 A.M.	N. Tauri	6	3 0 42 A.M.	Bright	
11	13 14	3 20	3 18	8 38 "	19	4	34 "	17	4	32 "			1 38 "	Dark	
16	12 54	3 40	3 30	8 22 "	28	0	56 "				75 Tauri	6	28 10 29 P.M.	Bright	
21	12 35	3 59	3 40	8 9 "									11 8 "	Dark	
26	12 15	4 19	3 50	7 55 "									29 2 28 A.M.		
30	11 57	4 37	3 59	7 44 "							Aldebaran	1	At this time the Star will be very near the upper edge of the Moon and it may prove to be an occultation; if so, it will disappear at a point a little to the right of the highest point of the Moon, and become visible again a few minutes afterwards		
	11 42	4 52	4 6	7 34 "											

September 7th, after midnight the four Satellites of Jupiter are E.; and on the 10th day they are W. till the 2nd Satellite passes behind the Planet at 1h. 56m. a.m. (as above); on the 17th day they are also W. till the 2nd Satellite passes behind the Planet at 4h. 32m. a.m. (as above).

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Peri- gee) from the Earth in each Lunation.				Days of the Month.	RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.											
					MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.	
					Right Ascension	Declina- tion North.	Right Ascension	Declina- tion South.	Right Ascension	Declina- tion North.	Right Ascension	Declina- tion North.	Right Ascension	Declina- tion South.	Right Ascension	Declina- tion North.
LAST QUARTER	..	1d. 9h. 14m. P.M.		1	9h. 40m	15° 1'	12h. 48m	11° 5'	2h. 41m	12° 23'	7h. 1m	22° 38'	22h. 48m	9° 52'	1h. 6m	6° 19'
NEW MOON	..	9 3 47 P.M.		6	10 14	12 38	12 53	12 25	2 46	12 50	7 5	22 33	22 46	10 0	1 6	6 16
FIRST QUARTER	..	17 7 21 P.M.		11	10 50	9 22	12 54	12 24	2 50	13 13	7 8	22 28	22 45	10 9	1 5	6 12
FULL MOON	..	24 2 25 P.M.		16	11 25	5 36	12 52	13 55	2 53	13 31	7 11	22 23	22 44	10 18	1 4	6 8
APOGEE	..	11 1 P.M.		21	11 59	1 40	12 47	13 53	2 55	13 44	7 14	22 19	22 42	10 26	1 4	6 4
PERIGEE	..	24 9 P.M.		26	12 30	2 15s	12 38	13 14	2 55	13 53	7 17	22 14	22 41	10 33	1 3	5 59

## September Anniversary.



THE LORDS AND COMMONS AT WHITEHALL DECLARE THE THRONE VACANT BY THE FLIGHT OF JAMES.

## ABDICATION OF JAMES II.

In the death of James the Second, which occurred at St. Germain's on the 16th September, 1701, it has been truly said that "Britain was happily delivered from the perverse and incurable dynasty of the Stuarts." James was a weak and narrow minded bigot, with a cold and ungenerous temper, and from the time he ascended the throne, seems to have acted with a steady determination to render himself absolute, and to proceed by every direct and indirect means to overthrow the established church. But these innovations in religion and government gradually united opposing interests, and a large body of the nobility and gentry concurred in an application to the Prince of Orange. All confidence being destroyed between the King and the people, it became an easy and safe invasion, and James was compelled to seek safety by flight on the night of the 13th of December, 1688. He crossed the Thames at Lambeth, and made his way with all speed to Feversham, where he embarked in a Custom-house hoy. It blowing a strong gale at the time, the master of the little vessel wanting more ballast, ran into the western end of the Isle of Sheppey, where the people seized the disguised King as a *fugitive Jesuit*, treating him with proportionable rudeness, and carried him back a prisoner to Feversham. Then he made himself known; told the rabble, who had been calling him "a hatchet-faced Jesuit," that he was their King, procured pen, ink, and paper, wrote a note to Lord Winchelsea, Lieutenant of the county, who hastened to him to rescue him out of the rude hands of that rabble rout of fishermen, sailors, and smugglers, who took his money, but refused to let him go. Never, perhaps, did a fallen despot present so miserable a spectacle. His mind was a complete wreck: he told the mob that the Prince of Orange was seeking his life, and he screamed for a boat! a boat! that he might escape. When he was conducted by Lord Winchelsea from the public house to a private house in the town, he fell a weeping, and deplored his great misfortune in losing a piece of the wood of the true cross, which had belonged to Edward the Confessor. On the night of the 23rd of December he rose from his bed, dressed himself, and, with his natural son, the Duke of Berwick, and two or three servants, walked down to the beach and put off in an open boat. On the following morning he reached a fishing smack which had been hired for the voyage, and, passing the guard-ships at the Nore without molestation or challenge, he landed on the morning of the 25th, at the small town of Amblesette.

James was enabled in March, 1689, to make an attempt for the recovery of Ireland. The battle of Boyne, fought in June 1690, compelled him to return to France. All succeeding projects for his restoration proved equally abortive, and, on the 25th of December the lords spiritual and temporal, to the number of about ninety, who had taken their places in the House of Lords, requested William to take upon him the administration of affairs and the disposal of the public revenue

and to issue writs for a "Convention" to meet on the 22nd of January; and on the following day an assembly of such persons as had sat in Parliament in the reign of Charles II., to the number of about a hundred and fifty, together with the Aldermen of London and fifty of the Common Council, having met at St. James's pursuant to the desire of the prince, immediately proceeded to the Commons' House, and there agreed upon an address similar to that of the Lords. The prince despatched circular letters, accordingly, to the several counties, universities, cities, and boroughs; and in the meantime the country, the fleet, and all that remained of James's army, submitted quietly to his authority. In Ireland it was very different; but in Scotland men were as prompt in their obedience as in England.

The two Houses then adjourned to the 28th, on which day the Commons, having re-assembled, resolved themselves into a Committee of the whole House to take into consideration the state of the nation. Mr. Hampden was in the chair. Dolben, son of the late Archbishop of York, "was the bold man who first broke the ice, and made a long speech tending to prove that the King's deserting his kingdom without appointing any person to administer the government, amounted, in reason and judgment of law, to a demise." This opinion was taken up and defended by several other members. The Tories, including Sir Edward Seymour, who had been one of the first to join the Prince of Orange, made a vain effort to procure an adjournment; and the Committee, after a stormy debate of many hours, voted the resolution—"That King James II., having endeavoured to subvert the constitution by breaking the original contract between king and people, and, by the advice of Jesuits and other wicked persons, having violated the fundamental laws, and withdrawn himself out of the kingdom, has abdicated the Government, and that the throne is thereby become vacant." Mr. Hampden was ordered to carry up this resolution to the Lords, and to request their concurrence, which they finally gave on the 12th of February. The penances and mortifications to which James subjected himself hastened his end, and he had been dying all the summer of 1701. On Friday, the 2nd of Sept., a few days before the conclusion of the grand alliance, he was seized with a fainting fit in the chapel of the palace of St. Germain. He was pretty well the next day, but on Sunday he fell into another fit and lay for some time without life or motion. James lingered till the following Friday, the 16th of September, and then expired in the 67th year of his age. His body lay exposed four-and-twenty hours in the midst of priests and monks, who sang the office for the dead all the night through, and in the morning celebrated masses at two altars erected in the room. The body was deposited in the church of the English Benedictine monks in Paris, there to remain "till it should please God to dispose the people of England to repair, in some measure, the injuries they did him in his life, by the honours they should think fit to show him after his death."

## SEPTEMBER.

In this month the autumnal flowers begin to come into blossom. The different kinds of small-flowered asters, called Michaelmas daisies, are now in flower; and the pale purple flowers, on long naked tubes, of the colchicum, or autumnal crocus, now begin to appear. In the gardens, the dahlias are in all their splendour, the *Athæa frutescens*, and the hollyhocks. It is at this season that the saffron is gathered. It is the stigma of a kind of crocus (*Crocus autumnalis*), which is taken out and dried. This crocus, though it flowers in autumn, is quite a different plant from the colchicum; and it may be known by the stigma projecting, through an opening in the flower, on one side. It is cultivated in fields, on a large scale, near Saffron Walden, in Essex, and in several other parts of Great Britain.

Mushrooms, and various kinds of fungi, are in season in this month. Every fungus consists of a stem, which is called *stipes*, surmounted by a cap, or *pileus*, under which are a number of thin plates, arranged around the centre, like the radii of a star, and are called the *lamellæ*, or gills, and among which are placed the *sporules*, or seeds. The botanical name of the common eatable mushroom is *Agaricus campestris*; but there are several other species of *Agaricus*, which are poisonous, when eaten in a fresh state. In Russia and Poland, however, nearly all the kinds of *Agaricus* are eaten; as they are first dried, and then reduced to powder, and it is principally their acrid juice that renders them unwholesome. The true mushroom appears, when young, in the shape of a button, with a white skin coming down from the cap to the root, so as to hide both the stem and gills. As the stem grows, the white skin, which is called the veil or curtain, bursts, and the gills appear of a beautiful pink, which contrasts strongly with the whiteness of the cap. As the mushroom becomes older, the gills become of a dark liver colour, and the skin of the cap loses its whiteness and smoothness, and turns brown and rough; while, when it is still older, the rim of the cap curls up on the outside, the gills turn black, and the whole mushroom becomes perforated with insects. When the mushroom is in this state, it is called a flap, and it is unfit for any use but making into catsup. It is reckoned most wholesome just after the veil has burst, and the gills appear. Truffles are found in this month, in some parts of England, generally in beech woods. They are tubers which grow underground, like potatoes; only, as they send up no stalk, they are very difficult to find. In Germany, they train dogs and pigs to hunt for truffles; and, when these animals discover them by their smell, they begin to scratch the ground, and the truffle-hunters, digging in that place, are sure to find the tubers.

Many of the wild birds that visit England in the autumn appear in this month; and, among others, various kinds of wild ducks and geese. They come in flights, and are very noisy in the air; their perpetual clamour being supposed to be designed to prevent them from dispersing and losing their companions. As in this month partridge-shooting begins, it may be interesting to say a few words on these well-known birds. Young partridges may frequently be seen running as soon as they are hatched, and sometimes even with the remains of the shells upon their heads. The hen partridge is very fond of her young, and "it is not uncommon to see an old partridge feign itself wounded, and run along the ground, fluttering and crying, before either dog or man, to draw them away from its helpless, unfledged young ones." Partridges are found in all parts of Great Britain, where corn is cultivated, but never at any great distance from corn-fields. The hen partridge makes no proper nest, but only scrapes a little hollow in the ground, in which she lays from twelve to twenty eggs. The young partridges in one brood generally fly together, and are called a covey. In Scotland partridges are only found in glens and valleys, while the grouse and ptarmigan are on the hills. Another species of this genus, generally called the red-legged or Guernsey partridge, is found in Suffolk, and in some other parts of England. These birds are larger than the common species; the bill, the legs, and the feet, are of a bright red, and there is a good deal of red in the plumage. They are reckoned very fine in France, but are not much admired in this country. Their habits are very different from those of the common partridge, as they frequently roost on trees, and will breed in confinement. Most of the migratory birds that leave England for the winter depart in this month; and some of those birds which remain in England during the winter, and which become silent about Midsummer—such as the thrush, the blackbird, the woodlark, and the willow-wren—resume their song in September. The male redbreasts that were hatched in spring, also begin to sing in this month, after they have moulted and acquired the red feathers on the breast. Before that period, the young are scarcely to be distinguished from those of the redstart, particularly the blue-throated kind; though after they have moulted, and the one has acquired its blue feathers, and the other its red ones, scarcely any two birds can be more distinct.



THE BLUE-THROATED REDSTART.

In this month all kinds of shell fish are in high season. Oysters, it is true, are allowed to be sold in August; but they are not considered to have attained their full flavour before September. Oysters are so common that few people think of the peculiarities of their construction, which is, in fact, very curious. The oyster

is a molluscous or soft-bodied animal, of the kind called *Acephalus*, or non-headed, as it has no distinct head. The gills, or breathing apparatus, form what is commonly called the beard of the oyster. The creature is attached by strong muscles to its shell, which, as it consists of two parts, or valves, is called a bivalve, to distinguish it from those which are in one part, like that of the snail, and which are called univalves. The mouth of the oyster is a mere opening in the body, without jaws or teeth, and its food consists of nourishing substances which may be in the water, and which are washed into the shell when it is open. Oysters attach one of their valves to rocky ground, or some fixed substance, by means of a mucilaginous liquid which soon becomes as hard as the shell. Oysters generally spawn in May, and their growth is so rapid, that in three days after the deposition of the spawn the shell of the young oyster is nearly a quarter of an inch broad, and in three months it is larger than a shilling. The animal of the oyster appears to be extremely inanimate: it fixes itself to any object that may be near, being sometimes found attached to the back of a living lobster or crab, and frequently to the roots of trees. Craw-fish, lobsters, crabs, shrimps, and prawns, though generally called shell fish, do not belong to the same class of animals as the oyster, but to the Crustaceae, because they are covered with crust-like shells. They also belong to the class of animals called Articulate, and have their bodies articulated, that is, jointed, so that they can stretch them out or curl them up at pleasure. A crustacean animal consists of three parts—the head, the carapace, which is covered with one entire shell, and what is popularly called the tail, which consists of seven rings, or joints. There are fourteen rings in that part of the body which is called the carapace, but they are only used when the animal changes its shell. The joints in the tail are to enable the animal to spring forward, which it does frequently when it wishes to change its position. It can also crawl, but it moves in this manner awkwardly, and in an oblique direction. The river craw-fish belongs to the same genus (*Astacus*) as the lobster, and both have long tails, which are spread out when they crawl, and numerous legs and claws, with which they can pinch severely when they wish to defend themselves. The crab has a short tail, and belongs to the genus *Cancer*. The shrimp, though it has no claws, properly so called, has two feet larger than the others, each of which has a hooked jointed nail. The prawn, which is quite different from the shrimp, is nearly allied to the crayfish, or thorny lobster. All the Crustaceae have the power of renewing their claws if they are torn off at a joint, and they change their shells every year. The new shell is at first quite soft, and at that period the fish are unwholesome to eat. The females spawn in July and August, and soon after great numbers of the little Crustaceae may be found swimming about in their proper forms, sometimes not more than half an inch in length.

Abundance of spiders are found at this season. Spiders are articulated animals, and possess the same power of renewing a lost limb as the crustaceae. The diadem spider (*Epeira diadema*) is one of the largest of the British kinds. It is a garden spider, and is easily recognised by the beautiful little gem-like marks on its body and legs. The web of this spider is found in great abundance during the months of August, September, and October. "The top line of this web," Mr. Westwood observes, "appears to be first spun, either by attaching a thread to a neighbouring tree, and then carrying it along until it is of sufficient length, when it is attached to some adjacent object to which the spider has crawled, or by throwing out a floating line, whilst the spider remains stationary, the action of the air carrying this line on until it becomes attached to some object, when, in either case, it is doubled and redoubled until it is of sufficient strength to bear the weight of the intended fabric, together with the spider itself. The other outer threads of the frame work are then added, and then cross lines carried from one point of the web to another exactly opposite, forming a complete series of spokes or radii, which she then attaches together by a spiral series of transverse bars of a more glutinous thread." The rapidity with which these webs are constructed is astonishing, as is also the accuracy with which the webs are formed. There are many different kinds of spiders, but nearly all of them envelope their eggs in a covering of silk, forming a round ball, which the spider takes care to hang up in some sheltered place till the spring. The mode in which the ball is formed is very curious: the mother spider "uses her own body as a gauge to measure her work, in the same way as a bird uses its body to gauge the size and form of its nest. The spider first spreads a thin coating of silk as a foundation, taking care to have this circular by turning round its body during the process. It then, in the same manner, spins a raised border round this till it takes the form of a cup, and, at this stage of the work, it begins to lay its eggs in the cup, not only filling it with these up to the brim, but piling them up above it into a rounded heap, as high as the cup is deep. Here, then, is a cup full of eggs, the under half covered and protected by the silken sides of the cup, but the upper still bare and exposed to the air and the cold. It is now the spider's task to cover these, and the process is similar to the preceding, that is, she weaves a thick web of silk all round them, and instead of a cup-shaped nest like some birds, the whole eggs are enclosed in a ball much larger than the body of the spider that constructed it."—(*Penny Cyclopædia*.) In fine weather, the female dragon-flies may sometimes be seen in this month depositing their eggs, which they lay in water, making a strange noise, as though they were beating the water while they are depositing their eggs; and the eggs themselves look like a floating bunch of small grapes. The larvæ, when hatched, live in the water, and it is scarcely possible to fancy more disgusting-looking creatures. They are short, and comparatively thick, and their motions are heavy and clumsy. They soon shed their skins, and become pupæ, still continuing to live in the water. The pupa of the dragon-fly differs from the larva, principally in having four small scales on its sides, by which the future wings are concealed. While the dragon-fly continues in its aquatic state, both as larva and pupa, it devours all the insects it can catch; but as it can only move slowly, it is furnished with a very curious apparatus to its head, which it can project at pleasure, and which it uses as a trap. This apparatus consists of a pair of very large, jointed, moveable jaws, which the insect keeps closely folded over its head, like a kind of mask, till it sees its prey; when it does, it creeps softly along till it is sufficiently near, and then it darts out those long, arm-like jaws, and seizing the insects it had marked, it conveys them to its mouth. When the dragon-fly emerges from its pupa case, it places itself on the brink of the pond, in which it has existed in its previous state, or on the leaf of some water-plant which is sufficiently strong to bear its weight, and there it divests itself of its pupa case, which, as it afterwards lies on the bank, looks exactly as though the insect were still contained in it. The insect, when it first appears, has two very small wings, but they gradually swell out, the veins in them appearing to fill with some coloured liquid, and two other wings gradually appear. As soon as the wings are fully expanded, and have attained their beautiful gauze-like texture, the dragon-fly begins to dart about, and to catch any poor unfortunate insect that may fall in its way. A dragon-fly may sometimes be seen flying about with an insect in its mouth so much larger than its own head, that it is difficult to imagine how it will contrive to swallow it. The mouths and stomachs of dragon-flies are, however, gifted with an extraordinary power of distension; and thus, however large the captured fly, moth, or butterfly, may be, it disappears, as though by magic.



NATIONAL SPORT, NORTH AMERICA—  
BUFFALO HUNT.

M D	W D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.				HIGH WATER AT LONDON BRIDGE		E. VA- TION OF TIME. Subt.	Day of the Year	
			Rises.	Sets.	DECLI- NATION NORTH.	Rises. Afternoon	Souths.	Sets. Morning	Before Sunrise.			After Sunset.		Morning.			Afternoon.
									O'Clock 2h. 4h. 5h.	Moon Age	O'Clock 7h. 8h. 10h.	O'Clock 7h. 8h. 10h.					
1	F	Pheasant shooting	6 15	40	3 3	10 57								6 35	7 5	10 11	274
2	S	begins	6 35	38	3 26	11 57	6 42	2 21		23				7 35	8 10	10 30	275
3	S	18TH S.AFT. TRIN.	6 55	35	3 49	Morning.	7 31	2 54		24				8 55	9 35	10 49	276
4	M	α Andromadae souths at 11h. 8m. P.M., 67 deg. high	6 75	32	4 13	1 1	8 18	3 25		25				10 15	10 55	11 7	277
5	Tu	Venus rises 6h. 16m. A.M.	6 9	29	4 36	2 2	9 2	3 51		26				11 30		11 25	278
6	W	Faith	6 10	27	4 59	3 5	9 46	4 17		27				0 3	0 30	11 43	279
7	Th	β Aquarii souths at 8h. 20m P.M., 32 deg. high	6 12	24	5 22	4 6	10 28	4 40		28				0 49	1 10	12 0	280
8	F	Moon in Apogee	6 14	22	5 45	5 10	11 11	5 3		29				1 27	1 45	12 17	281
9	S	St. Denys. Eclipse	6 15	20	6 8	6 12	11 53	5 26		30				1 59	2 15	12 34	282
10	S	19TH S.AFT. TRIN.	6 17	18	6 31	7 13		5 51		1				2 33	2 45	12 50	283
11	M	The Sun rises E. by S. and sets W. by S.	6 19	15	6 54	8 17	1 21	6 20		2				3 2	3 20	13 5	284
12	Tu	Mars rises 6h. 9m. P.M. near the E.N.E.	6 20	13	7 16	9 17	2 7	6 52		3				3 33	3 50	13 20	285
13	W	Fomalhaut souths at 9h. 17m. P.M., 8 deg. high	6 22	10	7 39	10 16	2 54	7 28		4				4 1	4 20	13 35	286
14	Th	Jupiter rises 9h. 43m. P.M.	6 24	8	8 1	11 14	3 44	8 13		5				4 35	4 50	13 49	287
15	F	Saturn sets 2h. 9m. A.M.	6 25	6	8 24		4 34	9 3		6				5 8	5 30	14 2	288
16	S	20TH S.AFT. TRIN.	6 27	5	8 46	0 58	5 26	10 2		7				5 50	6 10	14 15	289
17	S	St. Luke	6 28	2	9 8	1 36	6 19	11 7		8				6 35	7 5	14 28	290
18	M	The Sun in Libra	6 30	0	9 30	2 12	7 12			9				7 35	8 15	14 40	291
19	Tu	Bat. of Navar. 1827	6 31	4	9 52	2 46	8 6	0 19		10				9 0	9 45	14 51	292
20	W	Battle of Trafalgar, 1805—Nelson killed	6 32	4	10 14	3 17	9 0	1 34		11				10 23	11 2	15 2	293
21	Th	Moon in Perigee	6 34	4	10 35	3 48	9 55	2 54		12				11 35		15 12	294
22	F	21ST S.AFT. TRIN.	6 36	4	10 56	4 17	10 50	4 15		13					At Midnight.	15 21	295
23	S	St. Crispin and St. Crispianus	6 38	4	11 18	4 51	11 48	5 36		14				0 55	1 15	15 30	296
24	S	Arctis souths at 11h. 35m. P.M., 61 deg. high	6 40	4	11 39	5 28		6 58		15				1 40	2 0	15 38	297
25	M	St. Simon and St. Jude	6 42	4	12 0	6 6	0 46	8 16		16				2 25	2 50	15 45	298
26	Tu	Sun in Scorpii from the 24th	6 44	4	12 20	6 54	1 44	9 30		17				3 10	3 35	15 52	299
27	W	22ND S.AFT. TRIN.	6 46	4	12 41	7 47	2 43	10 35		18				3 55	4 20	15 58	300
28	Th		6 48	4	13 1	8 44	3 40	11 32		19				4 40	5 0	16 3	301
29	F		6 50	4	13 21	9 45	4 34			20				5 25	5 45	16 7	302
30	S		6 51	4	13 36	10 50	5 25	0 55		21				6 15	6 40	16 11	303
31	S		6 53	4	14 1	11 53	6 14	1 29		22				7 10	7 40	16 14	304

## OCTOBER.

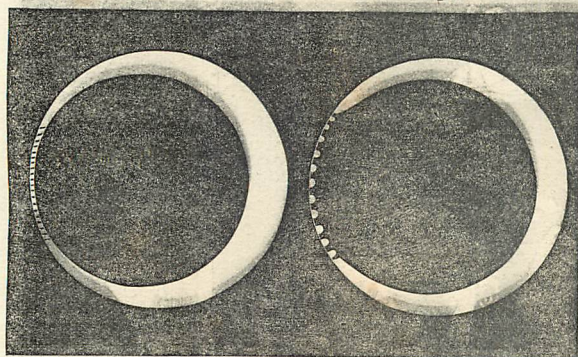
THE MOON is new at 7 minutes after 9 o'clock in the morning of the 9th, and as the line drawn from the Earth to the Sun nearly passes through the centre of the Moon, an Eclipse of the Sun takes place; and as the Moon at the time is nearly in Apogee, or at her greatest distance from the Earth, her diameter appears to be less than that of the Sun, and consequently the Eclipse is annular. She enters her 1st quarter at 21 minutes after 7 on the morning of the 17th; she is full at 36 minutes after 11 in the evening of the 23rd, but without an eclipse; and she enters her last quarter on the 30th at 56 minutes after 9 o'clock in the evening.

A total and annular eclipse of the Sun, at any particular place, is an event of a very rare occurrence, since not more than half a dozen have been recorded as having been seen in Europe since the invention of the telescope. The accounts of these are discordant in several particulars; probably owing to the sudden and unexpected appearances that have prevented themselves. The difficulty arising from this circumstance, with respect to the phenomena that may be expected in future eclipses, is much increased from the want of drawings to represent the exact appearance that have been seen. As such, however, are much more readily understood than any verbal description, we shall collect those that have been made, and hope by this means that the several phenomena will be fully comprehended, and that persons beforehand may know what phenomena may be expected, and have an opportunity of confirming, or otherwise, by their testimony, as to those which may happen.

APPEARANCE OF THE SUN AT THE ANNULAR ECLIPSE OF 1836, MAY 15, AS SEEN BY MR. F. BAILY.

Fig. 1.

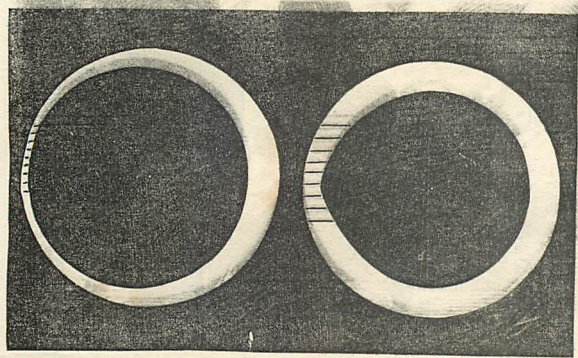
Fig. 2.



In 1836, on May 15, an Eclipse of the Sun was annular at Jedburgh, in Roxburghshire; and Mr. Baily, late President of the Royal Astronomical Society, went there for the purpose of witnessing certain singular appearances which had been recorded as having taken place in former Eclipses. Baily, in an account

Fig. 3.

Fig. 4.



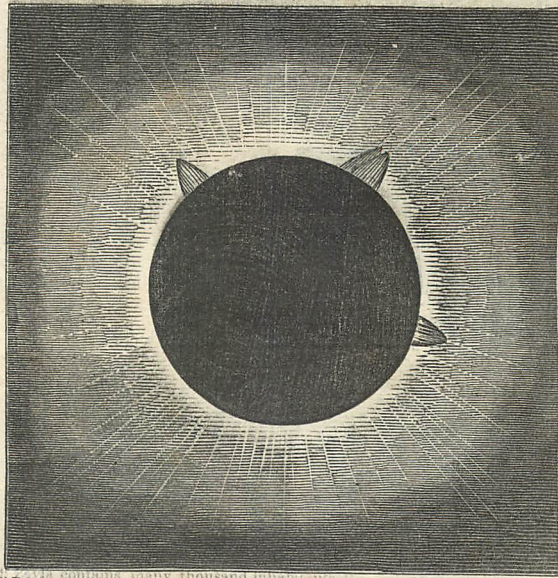
of the observed phenomena, furnished to the Astronomical Society, observes, "when the cusps of the Sun were about 40° asunder, a row of lucid points, like a string of bright beads, irregular in size and distance from each other, suddenly formed round that part of the circumference of the Moon that was about to enter, or which might be considered as having just entered, on the Sun's disc. Its formation indeed was so rapid that it presented the appearance of having been caused by the ignition of a fine train of gunpowder. (See Fig. 1.) My surprise, however, was great on finding that these luminous parts, as well as the dark intervening spaces, increased in magnitude, some of the contiguous ones appearing to run into each other like drops of water: for, the rapidity of the change was so great, and the singularity of the appearance so fascinating and attractive, that the mind was for the moment distracted, and lost in the contemplation of the scene. (See Fig. 2.) Finally, as the Moon pursued her course, these dark intervening spaces were stretched out into long, black, thick, parallel lines. (See Fig. 3.) Fig 4 represents a continuation of the same phenomenon; when, all at once, the long threads suddenly broke and wholly disappeared, leaving the circumferences of the Sun and Moon in those points, as in the rest, comparatively smooth and circular; and the Moon perceptibly advanced on the face of the Sun.

"After the formation of the Annulus thus described, the Moon preserved its usual circular outline during its progress across the Sun's disc, till its opposite limb again approached the border of the Sun, and the annulus was about to be dissolved. When (all at once,) the limb of the Moon being at some distance from the edge of the Sun, a number of long, black, thick parallel lines, exactly similar in appearance to the former ones above mentioned, suddenly darted forward from the

Moon and joined the two limbs as before: and the same phenomena were thus repeated, but in an inverse order."

On July 8th, 1842, a total Eclipse of the Sun took place, and Mr. Baily went to Pavia, in Italy, to observe it. In an account of the phenomenon from him to the Royal Astronomical Society, Mr. Baily remarks: "I at first looked out very narrowly for the black lines which were seen in the Annular Eclipse of 1836, as they would probably precede the string of beads. These lines, however, did not make their appearance; or, at least, they were not seen by me. But the beads were distinctly visible; and on their first appearance I had noted down on paper, the time of my chronometer, and was in the act of counting the seconds in order to ascertain the time of their duration, when I was astounded by a tremendous burst of applause from the streets below, and at the same moment was electrified at the sight of one of the most brilliant and splendid phenomena that can well be imagined; for, at that instant, the dark body of the Moon was suddenly surrounded with a corona, or kind of bright glory, similar in shape and magnitude to that which painters draw round the heads of saints, and which by the French is designated an *aureole*."

APPEARANCE OF THE TOTAL ECLIPSE OF THE SUN ON JULY 8, 1842, AS SEEN AT PAVIA, IN ITALY, BY MR. F. BAILY.



"Pavia contains many thousand inhabitants, the major part of whom were at this early hour, walking about the streets and squares, or looking out of windows, in order to witness this long talked of phenomenon; and when the total obscuration took place, which was instantaneous, there was a universal shout from every observer, which 'made the welkin ring,' and for the moment drew my attention from the object with which I was immediately occupied. (See Figure.) I had indeed anticipated the appearance of a luminous circle round the Moon during the time of total obscuration; but I did not expect from any of the accounts of preceding eclipses that I had read, to witness so magnificent an exhibition as that which took place." Mr. Baily then proceeds to say that the most remarkable circumstance attending this phenomenon, was the appearance of three large protuberances, apparently emanating from the circumference of the Moon. (See Figure,) and he remarks that his attention was so constantly taken up by the remarkable and unexpected appearances, that he omitted to watch for the reappearances of the beads, and, therefore, he could not add his testimony to the recurrence of that phenomenon.

At page 52 is a chart showing the parts of France, England, and Ireland, that the Eclipse will be annular. At all places situated on, or near the central line, the Eclipse will be central and annular, the ring appearing of the same dimensions all round, or nearly so. At all places situated between the central line and those N. and S., marked respectively northern and southern limit, the Eclipse will be annular, but the ring will be of uneven dimensions, and it will be of shorter duration. At all places beyond those limits the Eclipse will not be annular, a partial eclipse will only take place, and the further removed the place may be, the less the eclipse will be. At all places N. of these lines a portion of the upper part of the Sun will be visible; and at all places S. of those lines, a portion of the lower part of the Sun will be visible. The times at which the several successive steps in the phenomena happen are mentioned below for different places.

Phases of the Eclipse on Oct. 9, 1847.	London.	Cambridge.	Edinburgh.	Dublin.	Havre.	Paris.	Colmar.
The Sun rises at . . .	6 15	6 14	6 19	6 16	6 12	6 12	6 12
The Eclipse begins at . . .	6 14	6 15	6 7	5 51	6 12	6 21	6 41
Formation of the ring . . .	7 26	No ring	No ring	No ring	7 22	7 32	7 54
Greatest eclipse . . .	7 27	7 28	7 18	7 1	7 25	7 34	7 58
Rupture of the ring . . .	7 28	No ring	No ring	No ring	7 29	7 38	8 1
End of the Eclipse . . .	8 48	8 49	8 36	8 20	8 47	8 58	9 24
Duration of the ring . . .	1	A partial eclipse	A partial eclipse	A partial eclipse	6	6	6
Duration of the Eclipse . . .	2 34	2 33	2 29	2 29	2 35	2 37	2 43
Proportion of the Sun's diameter eclipsed at places where no ring is formed . . .		9-10ths of the lower limb	3-4ths of the lower limb	9-10ths of the lower limb			

(Continued on page 53.)

THE TIMES OF THE BEGINNING AND ENDING OF THE ECLIPSE AT THE FOLLOWING PLACES MAY ALSO BE FOUND USEFUL.

	Altona.	Berlin.	Bonn.	Breslau.	Göttingen.	Gotha.	Königsberg.	Manheim.	München.	Pulkowa.	Vienna.
Beginning . . .	7 11	7 25	6 55	7 40	7 7	7 12	8 1	7 0	7 11	8 56	7 33
Ending . . .	9 52	10 10	9 37	10 30	9 52	9 56	10 47	9 43	10 0	11 35	10 26
Prop. of the Sun's diam. eclipsed	5-6ths	5-6ths	11-12ths	5-6ths	5-6ths	11-12ths	3-4ths	11-12ths	11-12ths	7-12ths	11-12ths

## October Anniversary.



A DOMESTIC ANNIVERSARY.

## THE FIRST FIRE OF THE SEASON.

The lighting of the first fire for the season is one of the annual events of the domestic circle; the evenings shorten in and a sort of general chilliness becomes very perceptible, but there is a wish to prolong the very appearance of summer as long as possible, so there is a delay in ordering in the coals; but delay avails nothing—the sky becomes more and more Novemberish, and though it is only October by the almanack, yet it is voted winter by general consent, or rather general feeling, and the scene our artist has sketched is the result, we hope multiplied through thousands of happy households. The “old folks” tell us that they remember when the good people of the city never made themselves comfortable till “Lord Mayor’s day”—that great civic event—however cold the weather might be before the 9th of November. How they must have envied the cooks of the Guildhall Banquet, though in all the pride of self-denial they were above the weakness of confessing it! Perhaps Winter was tardier in his arrival in those days, and only sent a wholesome kind of “fine bracing air” till a day or two before the important 9th, when he would commission a smart frost to harden the roads for the procession, keep the shoes of the city footmen clean, and sharpen the noses and appetites of all parties present. Then it was considered winter, and it was orthodox to handle the poker and coal-skuttle. We are a more impatient generation, and do not choose to let our teeth chatter in our heads till his Lordship has paid his morning call to the Judges at Westminster. Every age has its prejudices, but we cannot help thinking our plan is the most rational—to light up the hearth when it is required, without regard whether it is “a day before or a day after” any event at all. So put on some more coals!

The air bites shrewdly, it is very cold;  
It is a nipping and an eager air!

There! now we begin to look comfortable, and to feel so also; and having broken a solid lump of the “heat-diffusing” substance, as Homer would have called it if he had ever sung of coals, for the mere sake of seeing the flame, we find ourselves warming into poetry, which thus breaks forth into—A SONG FOR THE SEASON.

## THE FIRST FIRESIDE.

The Spring may boast its vernal bow’rs,  
Its closing shades and opening flow’rs—  
Its songs of birds from morning hours  
To eventide!—  
Give me the homely joys we greet  
When, fill’d each hospitable seat,  
Some kindred spirits kindly meet  
Round First FIRESIDE.

Let Summer shed her burning glow  
To melt the chilly mountain snow  
And make the valley-streamlets flow  
In gushing pride—  
She hath not such a charm to make  
The drooping heart so sweetly take  
A part in mirth for mirth’s own sake  
As warm FIRESIDE!

Rich Autumn with her golden store,  
May count her treasures o’er and o’er,  
And say such wealth did ne’er before  
The land betide—  
But in a snug and shelter’d room  
Where neither mind’s nor season’s gloom  
Can blight our joyous-mental bloom—  
Give me—FIRESIDE!

Now fruits and flowers, and yellow sheaves  
Are gather’d in, and wither’d leaves  
Be all the traveller’s eye perceives  
In prospect wide—  
How sweet to ramble through some book,  
Or chat with social friends in nook  
From which we have the cheering look  
Of good FIRESIDE.

And then to send the glass around,  
And have the happy meeting crown’d,  
With some old ditty’s cordial sound,  
Too oft denied—  
To melodies of greater skill,  
That have no power, if they’ve the will  
To touch our hearts like those that thrill  
Round old FIRESIDE.

Then hail the genial season, hail!  
O’er mild October’s nut-brown ale,  
Let’s sit and hear the merry tale,  
Or aught beside—  
Which may the passing hour engage—  
Of life we’ll con the varied page,  
And hope for happy good old age  
By our FIRESIDE.

## OCTOBER.

THERE are few plants in flower in the month of October, but many are very ornamental in their fruit or seeds. Almost all the American *cratægi* are more ornamental in their fruit than in their flowers, the flowers in many cases differing very little from those of the common hawthorn; while the fruit is as large as a small apple, and is either of a bright yellow or dark scarlet, being in either case very ornamental. The mountain ash is now, as Wordsworth expresses it,

Deck'd with autumnal berries that outshine  
Spring's richest blossoms.

The white beam tree, and other plants of the same genus, are also covered with their scarlet berries. In the mountain districts, different kinds of juniper, bilberries, whortleberries, crowberries, and other dwarf moor plants, are in fruit. In the forests, the trees have now taken their autumnal tints: the lime is a pale orange; the maple, poplar, and birch, light yellow or straw colour; the wild cherry, the crab, the dogwood, the spindle tree, the guelder rose, and the five-leaved ivy, different shades of red; the elm, a dull brown; the horse chestnut and beech, a reddish brown; and the oak, yellow and brown. Some trees change very little, particularly those which grow near water, such as the willow and the alder; and others change very much, such as the sycamore, which Cowper well describes as—

"Capricious in attire;  
Now green, now tawny, and ere autumn yet  
Has changed the woods, in scarlet honours bright."

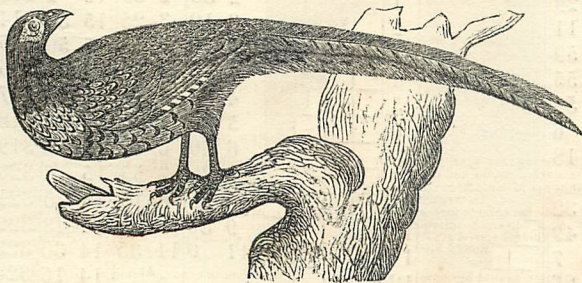
The ash seldom becomes beautiful in autumn, the leaves generally falling with the first frost, or becoming shrivelled up as if scorched. The beech, on the contrary, is perhaps one of the most beautiful of all trees in its autumnal tints, which display various shades of the richest yellows and browns, and which frequently retains its withered leaves till the following spring.

The leaves of the hornbeam take almost the same colour as those of the beech, and they remain on nearly as long. In pleasure-grounds the leaves of the liquidambar turn of a rich crimson; those of the *Diospyros Lotus* become pink beneath in autumn, and fall off altogether with the first frost. Thus, the tree may be clothed with leaves at sunset, and, after a frosty night, it may be found the next morning at sunrise entirely bare, the leaves lying in heaps upon the ground. The American oaks take beautiful colours in autumn; the leaves of the scarlet oak become scarlet; those of the red oak and some other kinds crimson; and those of the white oak violet. Some of the other kinds become almost black, and some yellow. A very good effect may be produced in plantations by attending to the autumnal colours of the leaves of trees. Most of the ferns are very beautiful at this season, from the rich brown of the sori, or clusters of seed cases at the back of the leaves.

In this month, numerous kinds of fungi appear. One of the most conspicuous of these is the fly-agaric, which, though it belongs to the same genus as the mushroom, is one of the most poisonous of all the kinds of fungus. This plant is large, and very handsome, having a bright scarlet cap, studded with pearl-like projections of a brilliant white. The botanists who have named the plant have, however, fancied that the white projections look like the maggots of flies, and hence the name of fly-agaric, though others derive the name from a decoction of the plant being sometimes used to poison flies. The Russians are said to make an intoxicating liquor with it, called Moncho More, and which brings on convulsions and raving madness, if drunk to excess. The Hydnum, or tree fungus, is found in woods, generally growing on the roots of trees. There are several kinds of this fungus, some of which are dried and powdered, and then eaten, in Sweden, and some of the other northern countries.

Various kinds of lichens are also extremely beautiful at this season, and some of the most curious of the mosses. Among these may be mentioned the dark green Hookeria, which is found in the south of Ireland, and near the waterfalls of Killarney. The leaves of this moss are broad, ending in a sharp point, and when they are examined in a microscope, they will be found to have two distinct mid-ribs, and the surface curiously reticulated. Another very beautiful moss which is found in the north of England and Scotland, and which is in fruit at this season, is the ostrich-plume moss (*Hypnum cristæ castrensis*). This is sometimes confounded with the crested feather-moss, which is common in rocky places in the chalky and limestone districts of Great Britain.

In this month pheasant-shooting begins. Pheasants are found in most parts of England, but they are less plentiful in the north than in the south; and in Scotland they are scarcely ever met with. Woods and corn-fields seem to be essential to the existence of this bird. It is very fond of acorns and beech-mast, and it also eats abundance of corn, sometimes even scratching up growing wheat, to bite off the grain still remaining at the root. Pheasants are very fond of the tubers of



THE COMMON PHEASANT.

one of the kinds of creeping crowfoot (*Ranunculus bulbosus*), a plant which is poisonous to human beings, from its extreme acidity. Pheasants will live in captivity, but when they are domesticated, the male bird must be kept apart from the young ones, or he will destroy them. In a wild state, the female carefully hides her nest from the male. The pheasant is a dull bird, and, when roused, it will frequently perch upon the first tree near, which it will suffer the sportsman to approach closely before it flies away. In October, also, most of the migratory birds who pass the winter in this country make their appearance, and, among others, the fieldfare and the redwing. These birds appear in large flocks in October, and generally remain in England till April. "The extensive lowlands," says Mr. Knapp, "of the river Severn, in open weather, are visited by prodigious flocks of these birds; but, as soon as snow falls, or hard

weather comes on, they leave these marshy lands, because their insect food is covered, or become scarce, visit the uplands, to feed on the produce of the hedges, and we see them all day long passing over our heads in large flights, on some distant progress, in the same manner as our larks, at the commencement of a snowy season, repair to the turnip fields of Somerset and Wiltshire. They remain absent during the continuance of those causes which incited their migration; but, as frost breaks up, and even before the thaw has actually commenced, we see a large portion of these passengers returning to their worm and insect food in the meadows, attended, probably, by many that did not take flight with them; though a great number remain in the upland pastures, feeding promiscuously as they can." The fieldfare is a kind of thrush; but, instead of singing melodiously, like the common thrush, it only utters a loud chattering noise. It has never been known to breed in this country, notwithstanding the immense quantities that are seen here. It is a very shy bird, and will not live in a cage. Fieldfares, when fat, are reckoned delicacies for the table. The redwing is also a kind of thrush, of very similar habits to the fieldfare, coming over to England in great flocks. It feeds upon the berries of the hawthorn, and also upon various kinds of insects; and it is particularly fond of the banded snail (*Helix nemoralis*), the shell of which it breaks against a stone or wall, in the same way as the garden thrush does. Like the fieldfare, it never builds in this country. It perches on trees, and may occasionally be heard to sing, but its note is generally only a loud chattering. The ring ouzel generally leaves England in this month. It is singular enough that these birds generally assemble in great numbers on the southern and eastern coasts of England for a week or two before they finally depart, as if they were half unwilling to go. The wheat-ear generally leaves England in this month, and shortly before their departure, great quantities of them are caught in Sussex and Dorsetshire, and sent to the London market. They "are caught in a singular manner, by placing two turves on edge; at each end of which, a small horse-hair noose is fixed to a stick, which the bird, either in search of food, or to evade a storm of rain, attempts to get under, and is caught. Upon inquiry of the shepherds, whose trade this is, we have been informed that fifty or sixty of these traps have had a bird in them of a morning; sometimes several mornings together; and then for a day or two scarcely one is to be seen; and yet they are never observed to come in flocks: it is the general opinion that they come in the night." — (*Ornithological Dictionary*.) They are esteemed very delicate eating, and little inferior to the ortolan.

At this season of the year several kinds of molluscous animals are to be found in shallow water, in brooks and ditches. One of the most common of these is what is called the horny coil shell, or *Planorbis cornuus*. The shell of this creature at first sight looks like that of one of those little flat snails which are sometimes found in cellars; but, on examination, it will be found to differ from these creatures in being exactly the same on both sides, or, in the language of a naturalist, having neither spire nor column. The animal belonging to this shell is extremely like a snail when it is crawling with its tentacula extended, but it is much smaller in all its parts. It is found in ditches and ponds. The amber snail (*Succinea amphibia*), that it derives its scientific name, as *succinum* signifies amber.



THE AMBER SNAIL.

The puddle-mud shell (*Lymnaea peregra*) is also very frequently found in this country. Its shell bears considerable resemblance to that of *Succinea*, but it is less transparent, and has a more horny look. The shells of all the species of *Lymnaea* have the aperture on the right hand, and the plait on the left hand; which distinguishes them from *Succinea*. Another kind of pond snail, called the stream bubble shell (*Physa fontinalis*), is distinguished from *Lymnaea* by its opening being on the left hand instead of the right. All the pond snails have a singular manner of appearing to crawl under the surface of the water with their shells downwards. They also let themselves down in the water with a thread, in the same way as some kinds of caterpillars let themselves down in the air. The common circle shell (*Cyclostoma elegans*) is found abundantly in various parts of England and Wales, near hedges, and in other sheltered situations. The shell is of a greyish, and sometimes purplish brown, occasionally marked with two rows of purplish brown spots. The operculum is hard and horny externally, and marked with a slight spiral line. The animal is of a greyish brown, with tentacula, having black tips like those of the snail. The cry stalline marsh snail (*Paludina vivipara*), is often found in marshy places or ditches, at this season. The shell is of an olive green, with five whorls, the lower ones of which are very distinctly marked, and very much inflated; and it bears considerable resemblance to the apple shells often found in collections which are brought from Egypt. The animals resemble a snail, and they are viviparous. The shells of the marsh snails are found abundantly in the river Colne, at Uxbridge; in the Thames; and in the rivers of Cambridgeshire, Oxfordshire, Essex, and Suffolk; but they are never found in the north of England, or near the sea. The river limpet (*Ancylus fluviatilis*), is a very small shell, found in streams and rivulets attached to stones. The animal is greyish, and very lively. The shell is almost transparent, with a blue tinge inside, and a pointed top, which is on one side, and slightly curved downwards. These animals are sometimes seen swimming in the water, just below the surface, with the shell downwards, like the pond snail.



LYMNAEA PEREGRÆ.



PHYSA FONTINALIS.

The insects which are most abundant this month, are the different kinds of flies, particularly the common blue-bottle, or blow-fly, and the crane-fly, or daddy long-legs. The latter belongs to the genus *Tipula*, and is remarkable for the extraordinary length of its legs. The blow-fly produces its young alive, and they begin to eat as soon as they are born. A single blow-fly has been known to produce twenty thousand living maggots; and each of these continues eating so voraciously, that in twenty-four hours it has increased its own weight above two hundred times; and in five days it has attained its full size. When the maggots have attained their full size, they go into the pupa state, and remain in that only about five days, when they become flies ready to produce thousands of more maggots, and afterwards flies, till the whole brood is destroyed by cold. The blue-bottle fly lays eggs, as does the common house fly. These eggs are generally deposited either in dunghills or other heaps of rubbish, from whence they issue in great quantities on a warm day. One kind of small two-winged fly lays its eggs on the leaf of the sow thistle, and the maggots live entirely upon the cellular tissue of the leaf, without touching the outer skin, either on the upper or under side. These maggots generally commit their ravages in the maggot state, early in the month of October, and appear in their fly state towards the close of that month; but Professor Rennie found one of these mining maggots at work in December, on the leaf of a purple cineraria, grown in a pot, and kept in the house.



NATIONAL SPORT, NORWAY—  
BEAR HUNT.

M	D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER AT LONDON BRIDGE			EQUA- TION OF TIME.		Day of the Year
			Rises.	Sets.	DECLINA- TION North.	Rises. Afternoon	Souths.	Sets. Morning	Before Sunrise. O'Clock.	After Sunset. O'Clock.	Moon's Age.	Morning.	Afternoon	Subt.			
														h. m.	h. m.	h. m.	
1	M	<i>All Saints</i>	6 56	4 32	14 20	Morning.	Morning.	1 56			23			8 15	8 57	16 16	305
2	Tu	<i>All Souls</i>	6 57	4 31	14 39	0 57	7 44	2 20			24			9 35	10 10	16 17	306
3	W	$\alpha$ Aquilæ souths 4h. 54m. P.M.	6 59	4 29	14 58	1 59	8 27	2 45			25			10 50	11 20	16 17	307
4	Th	Wm. III. land. 1688	7 14	27 15	17	3 1	9 9	3 7			26						308
5	F	Gunpowder Plot	7 24	26 15	36	4 2	9 51	3 40			27			0 14	0 35	16 16	309
6	S	$\alpha$ Cygni souths, 5h. 35m. P.M.	7 44	24 15	54	5 5	10 34	3 54			28			0 55	1 15	16 13	310
7	S	23RDS. AFT. TRIN.	7 64	23 16	12	6 8	11 18	4 20			29			1 31	1 45	16 10	311
8	M	$\beta$ Aquarii souths at 6h. 15m. P.M., 32 deg. high	7 74	22 16	29	7 10	Afternoon	4 53			1			2 4	2 20	16 7	312
9	Tu	Birth of Prince of Wales, 1841—Lord Mayor's Day	7 94	20 16	47	8 11	0 52	5 29			2			2 35	2 50	16 2	313
10	W	$\beta$ Aquarii souths 6h. 6m. P.M.	7 104	19 17	4	9 9	1 41	6 11			3			3 10	3 25	15 56	314
11	Th	<i>St. Martin's Day,</i> <i>or Martinmas</i>	7 124	18 17	21	10 3	2 31	6 59			4			3 40	3 55	15 50	315
12	F		7 144	16 17	37	10 53	3 23	7 55			5			4 15	4 30	15 43	316
13	S	Fomalhaut souths at 7h. 20m. P.M., 8 deg. high	7 164	14 17	54	11 37	4 15	8 58			6			4 50	5 10	15 35	317
14	S	24THS. AFT. TRIN.	7 184	12 18	10	Afternoon	5 7	10 6			7			5 30	5 53	15 26	318
15	M	$\alpha$ Pegasi souths 7h. 20m. P.M.	7 204	11 18	25	0 47	5 58	11 18			8			6 20	6 45	15 16	319
16	Tu	The Pleiades souths at 11h. 50m. P.M.	7 224	10 18	40	1 18	6 50	Morning.			9			7 20	7 53	15 6	320
17	W	<i>St. Hugh</i>	7 234	9 18	55	1 47	7 42	0 32			10			8 35	9 10	14 55	321
18	Th	$\alpha$ Andromedæ souths 5h. 11m. P.M.	7 254	8 19	10	2 16	8 36	1 49			11			9 50	10 25	14 43	322
19	F	Sun in Scorpio	7 274	7 19	24	2 46	9 30	3 7			12			11 0	11 35	14 30	323
20	S	<i>St. Edmund</i>	7 284	6 19	38	3 18	10 27	4 26			13					14 16	324
21	S	25THS. AFT. TRIN.	7 304	5 19	52	3 57	11 25	5 46			14			0 30	0 55	14 1	325
22	M	<i>St. Cecilia</i>	7 314	3 20	5	4 39	Morning.	7 3			15			1 21	1 45	13 46	326
23	Tu	<i>St. Clement</i>	7 334	2 20	18	5 29	0 24	8 15			16			2 10	2 30	13 30	327
24	W	Sun in Sagittarius	7 354	0 20	30	6 26	1 22	9 16			17			2 55	3 15	13 13	328
25	Th	<i>St. Catherine</i>	7 363	58 20	42	7 27	2 20	10 12			18			3 40	4 0	12 55	329
26	F	<i>St. Stephen</i>	7 383	57 20	54	8 33	3 14	10 54			19			4 25	4 45	12 37	330
27	S	The Sun rises S.E. by E., and sets S.W. by W.	7 393	56 21	5	9 39	4 6	11 30			20			5 5	5 30	12 17	331
28	S	1ST S. IN ADVENT	7 403	55 21	16	10 44	4 54	11 59			21			5 50	6 15	11 58	332
29	M	Aldabaran souths at 11h. 54m. P.M., 55 deg. high	7 423	54 21	27	11 48	5 40	Afternoon			22			6 40	7 5	11 37	333
30	Tu	<i>St. Andrew</i>	7 443	54 21	37	After Midnight.	6 23	0 48						7 35	8 0	11 15	334

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## NOVEMBER.

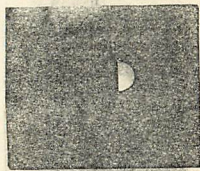
THE MOON rises after midnight, and before noon till the 13th, and between noon and midnight from the 14th to the end of the month. She sets before midnight till the 15th; and after midnight from the 17th. She is in Leo till the 3rd; is seen E. of Regulus; and she is moving towards a point a few degrees above Spica Virginis. On the 4th, 5th, and 6th, she is in Virgo, and in Libra on the 7th and 8th. On the latter day at 3h. 11m. A.M. she is new, but without an eclipse, as she is  $3\frac{1}{2}$  degrees from the line joining the Sun and the Earth. On the 9th and 10th she is in Ophiuchus; on the 11th, 12th, and 13th, she is in Aquila. From the 9th, her crescent will be seen after sun-set, N. of E. From the 11th to the 13th she is passing a barren region. On the 13th she passes at a considerable distance under the principal stars in Aquila. On the 14th, 15th, 16th, and 17th, she is in Aquarius. On the 15th she enters her 1st quarter. On the 17th she passes under the square of Pegasus, and at 6h. A.M. on the 18th, she is on the Equator, moving N. On the 18th, 19th, and 20th, she is in Aries, and moving directly towards Aldebaran. On the 21st, 22nd, and 23rd, she is in Taurus. On the 22nd, at Midnight, she and Aldebaran will nearly South together, the star being very near the Moon; and, at 10h. 4m. in the morning the Moon is full, but without an eclipse, as she is 4 degrees distant from the line joining the Sun and the Earth. On the 26th she is in Cancer, and in Leo to the end of the month, from the 27th. On the 29th, at 1h. A.M., Regulus is about  $4^\circ$  above the Moon, and on this day, at 4h. 22m. P.M. she enters her 3rd quarter.

MERCURY will be in the constellation of Scorpio till the 19th; in that of Ophiuchus, between the 19th and 25th; in that of Scorpio again between the 25th and 29th, and in that of Libra after the 28th.

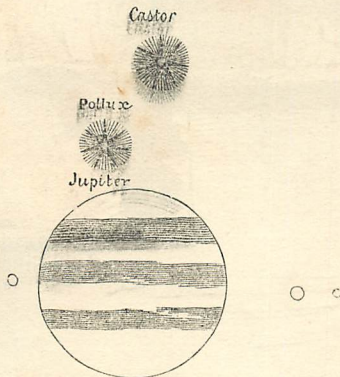
He sets on the 1st, at 5h. 9m. P.M., or 37 minutes after the Sun has set; on the 6th, at 5h. 4m. P.M.; on the 11th, at 4h. 58m. P.M.—on both days being 40 minutes after the Sun has set; on the 16th, at 4h. 49m. the Sun having set 39 minutes earlier; on the 21st, he sets at 4h. 30m., and on the 26th, at 4h. 3m. P.M., being 9 minutes only after the Sun has set. The point of the horizon at which he sets from the 1st to the 15th, is midway between S.W. by W. and S.W. On the 20th, it is S.W. by W., and at the end of the month it is midway between the W.S.W. and S.W. by W.

During the month he is moving Eastward among the stars, till the 15th, and Westward after that day.

APPEARANCE OF MERCURY ON THE 5TH, AND VENUS TOWARDS THE END OF THE MONTH.



RELATIVE SITUATION OF CASTOR, POLLUX, AND JUPITER DURING THE MONTH.



The planets are drawn upon a scale of 40" to an inch.

On the 1st, he is situated about  $6^\circ$  W.N.W. of Antares; on the 7th, he is  $2^\circ$  N. of that star; after that time he is moving Eastward of it, and on the 15th he is  $6^\circ$  E.N.E. of it. The Moon passes him early in the morning of the 10th.

VENUS will be in the constellation of Virgo all the month. On the 1st, she rises at 3h. 39m. A.M., and souths at 9h. 28m. A.M., at the altitude of  $35^\circ$ ; on the 15th, she rises at 3h. 17m. A.M., and souths at 9h. 0m. A.M.; on the 21st, she rises

at 3h. 14m. A.M., and after this time she rises later day by day; on the last day, she rises at 3h. 19m. near E. by S., and souths at 8h. 48m. A.M., and after this time she souths later every day.

At the end of the month of September it was stated that her motion at that time was Westward among the stars, and it continued such till October 16th. Between the 17th and the 25th, she was nearly in the same relative position among them, and after the 17th of October, her motion was again Eastward, as before September 7th; it continues Eastward during the month of November, and she is moving again towards Spica Virginis till the 28th, when she is  $4^\circ$  N. of that star. During this month Beta Leonis, Spica Virginis, and Venus form a conspicuous triangle.

On the 4th, in the morning, she is about  $1^\circ$  S. of the Moon. On the morning of the 8th, Venus is at her greatest brilliancy as a morning star.

MARS will be in the constellation Aries; he rises on the 1st, at about the time the Sun sets, and after this time he rises before the Sun sets, and, therefore, the times of his rising are not visible. He sets near the W.N.W. all the month: on the 1st at 6h. 53m. A.M.; on the 15th, at 5h. 37m. A.M., and on the last day at 4h. 29m. A.M. He souths on the first day at 1h. 37m. P.M.; on the 15th, at 1h. 25m., and on the last day at 9h. 18m. P.M., at an altitude of  $51^\circ$  each day.

The motion of the Planet among the stars is westward, till towards the end of the month, at which time he is stationary among them; and he has the same relative position for several days together. On the 20th, he is in a line drawn from the Pole Star, through Alpha Arietis, to  $11^\circ$  distance from that star; by this means and his great splendour during this month he will be readily found.

The Moon passes him on the 20th at noon.

JUPITER will be in the constellation of Gemini. He rises near the N.E. by N. point of the horizon. On the 1st day at 8h. 40m. P.M.; and on the last day at 6h. 40m. P.M.; he souths on the same days respectively at 4h. 49m., and 2h. 52m. A.M., at an altitude of  $60^\circ$  throughout the month.

He is stationary among the stars till towards the end of the month; after that time he moves slowly towards the W. During the month he is situated about  $10^\circ$  from Castor and  $5^\circ$  from Pollux.

During the night of the 25th, the Moon is near him, and at 1h. in the morning of the 26th, she passes him; being at the time  $5^\circ$  lower than he is; so that at this time Castor, Pollux, Jupiter, the Moon, and Procyon are one above the other, Castor being the highest and Procyon the lowest.

SATURN rises and sets at the same points of the horizon, and souths at the same altitude as in last month. His times of rising are about 2h. P.M., at the beginning and about 1h. P.M. at the end of the month. He souths at 7h. 53m. P.M.; and at 6h. 0m. P.M., on the 1st and last days respectively; and sets at 1h. 4m. A.M. on the 1st; on the 17th he sets twice on the same day, viz., at 0h. 1m. A.M. and at 1h. 57m. P.M., and on the last day he sets at 1h. 7m. P.M.

He is nearly stationary among the stars for the greater part of the month, and he is moving Eastward among them at the end; he is situated the same as in August.

On the 16th at 8h. 36m. P.M., the Moon is  $5^\circ$  higher than the Planet, and in the line joining the Pole Star and Saturn, so that before this time the Moon was W. and after this time she is E. of this planet.

URANUS sets at  $3^\circ$  S. of W. by N., on the 1st day at 4h. 52m. A.M., and on the last day at 2h. 52m. A.M. He souths on the 15th day at 9h. 15m. P.M. The Moon is W. of him on the 18th, and E. of him on the 19th.

TIMES OF THE SOUTHING, &c., OF THE PRINCIPAL FIXED STARS, WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Stars' Names.	Magnitude.	Time of southing during the evening of the 1st day.		Height in degrees above the horizon.	Setting.	Point of the horizon.
		H.	M.			
Alpha Aquilæ	1	5	3	47s	$6\frac{1}{2}$	Near W. by N.
Alpha Cygni	1	5	56	83s	Never Sets	
Alpha Cephei	3	6	35	79N	Never Sets	
Epsilon Pegasi	2	6	56	48s	$6\frac{1}{2}$	Near W. by N.
Fomalhaut	1	8	8	8s	$2\frac{1}{2}$	S.W. by S.
Alpha Pegasi	2	8	16	24s	$7\frac{1}{2}$	W.N.W.
Alpha Andromedæ	1	9	19	67s	$8\frac{1}{2}$	Near N.W.
Gamma Pegasi	2	9	24	53s	$7\frac{1}{2}$	W.N.W.
Alpha Cassiopeiæ	3	9	51	86N	Never Sets	
Alpha Arietis	3	11	18	61s	$8\frac{1}{2}$	Near W.S.W.

JUPITER'S SATELLITES.						OCULTATIONS OF STARS BY THE MOON.			
Days of the Month.	Length of Day, or number of hours between Sunrise and Sunset.	Number of hours and minutes the day has increased since the Shortest Day.	Time of Day-break, or beginning of Twilight.	Time of Twilight ending.	Eclipses of	Names of the Stars.	Magnitude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.
1	9 36	6 58	5 1	6 27	1st Sat. Emission.	q Leonis	5	3 4 6 A.M.	Bright
6	9 20	7 14	5 8	6 16	2nd Sat. Emission.	t Piscium	6	18 4 16 P.M.	Dark
11	9 6	7 28	5 15	6 15					
16	8 48	7 46	5 22	6 10					
21	8 35	7 59	5 29	6 6	3rd Sat. Im. and Em.	k Geminorum	5	25 11 17 P.M.	Dark
26	8 19	8 15	5 35	6 0		d Leonis	5	11 22 "	Dark
30	8 10	8 24	5 41	5 57				30 2 25 A.M.	Bright
								3 17 "	Dark

TIMES OF CHANGES OF THE MOON, And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth in each Lunation.

	Days of the Month.	MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.	
		Right Ascension.	Declination North.	Right Ascension.	Declination South.	Right Ascension.	Declination North.	Right Ascension.	Declination North.	Right Ascension.	Declination South.	Right Ascension.	Declination North.
NEW MOON	.. 8d. 3h. 11m. A.M.	1 15h.54m	23° 1'	12h. 7m	3° 10'	2h.20m	12° 52'	7h.29m	21° 55'	22h.35m.	11° 4'	0h.55m	5° 26'
FIRST QUARTER	.. 15 6 15 P.M.	6 16 17	24 9	12 16	3 0	2 13	12 36	7 29	21 55	22 35	11 4	0 57	5 23
FULL MOON	.. 20 10 5 A.M.	11 16 34	24 35	12 26	3 13	2 7	12 22	7 29	21 56	22 35	11 4	0 57	5 19
LAST QUARTER	.. 29 4 22 P.M.	16 16 40	24 9	12 39	3 45	2 2	12 13	7 29	21 57	22 35	11 3	0 56	5 16
APOGEE	.. 4 11 P.M.	21 16 30	22 32	12 54	4 35	1 58	12 8	7 28	22 0	22 35	11 0	0 55	5 13
PERIGEE	.. 20 5 P.M.	26 16 6	19 50	13 9	5 38	1 55	12 9	7 27	22 3	22 36	10 57	0 55	5 10

## November Anniversary.



ANNIVERSARY OF THE LANDING OF THE PRINCE OF ORANGE, AT TORBAY, NOV. 5, 1688.

## LANDING OF THE PRINCE OF ORANGE, NOV. 5, 1688.

The Fifth of November has a two-fold interest in our calendar, it being the anniversary of two of the most important events in our history—the discovery of “the Gunpowder Plot” in 1605, and “the Revolution” in 1688. The latter we have selected for our present illustration.

In 1688, the disgraceful acts of James II., having placed the country in a position of great difficulty, the heads of the several parties in the state joined in applying to James's son-in-law, William, Prince of Orange, for his assistance to save the public liberties; and he, at last, made up his mind to comply with their solicitations; and having arranged his preparations with consummate skill, he sailed from Holland with an army of about 14,000 men, composed partly of Dutch troops, and partly of English regiments in the service of the States, and landed at Torbay, on the coast of Devonshire, on Nov. 5, 1688. On the 8th he made a public entry into Exeter, where he remained for some days before any of the principal people of the country joined him; on the 21st he quitted Exeter on his march to London. On December 18th, the Prince, arrived with his army in London. Thus, with unparalleled ease and rapidity, was that unenviable and bloodless revolution effected, which changed the Royal line, and firmly established the Constitution of these realms.

William III. of Nassau, Prince of Orange, and King of England, was born at the Hague, in 1650. He was the son of William, Prince of Orange, and of Henrietta Maria, daughter of Charles I. He married the Princess Mary, daughter of James I. Duke of York; and succeeded to the stadtholdership in 1672; and was crowned with Mary, April 11, 1689. The year following William went to Ireland, where he defeated James at the battle of the Boyne. In 1691 he headed the confederated army in the Netherlands; took Namur in 1695; and in 1697 he was acknowledged King of England by the treaty of Ryswick. On the death of Mary, 1693, the Parliament confirmed to him the Royal title. His death was accelerated by an injury he had sustained in a fall from his horse.

The good Bishop Burnet being present, thus describes “the last scene of all” in the eventful life of this great Prince:—“The King's strength and pulse were still sinking as the difficulty of breathing increased, so that no hope was left. The Archbishop of Canterbury and I went to him on Saturday morning, and did not stir from him till he died. The Archbishop prayed on Saturday some time with him, but he was then so weak, that he could scarce speak, but gave him his hand, as a sign that he firmly believed the truth of the Christian religion, and said he intended to receive the sacrament. His reason and all his senses were entire to the last minute. About five in the morning he desired the sacrament. When this was done, he called for the Earl of Albemarle, and gave him a charge to take care of his papers. He thanked M. Auverquerque (or Overkirk) for his long and faithful services. He took leave of the Duke of Ormond, and called for the Earl

of Portland; but before he came his voice quite failed; so he took him by the hand, and carried it to his heart with great tenderness. He was often looking up to heaven, in many short ejaculations. Between seven and eight o'clock the rattle began; the commendatory prayer was said for him, and, as it ended, he died (on Sunday, the 8th of March), in the fifty-second year of his age, having reigned thirteen years and a few days.

“Perfection is not to be expected in a sovereign until the realization of the dreams of the Fifth-monarchy men: both as a sovereign and as a man William had faults and weaknesses and unamiable qualities; although these have all been grossly exaggerated by zealots of various and most opposite parties, the high churchmen detesting him on account of his indifference to the forms of church government, and both high and low on account of his toleration; the Jacobites heaping obloquy upon his name, because he practically upset the theory of the divine right of Kings; the Tories because he naturally preferred the Whigs, who had most contributed to his promotion; and the Republicans, then and in all subsequent times, because he did not try again the experiment which had been tried, and which had signally failed—because he was not his own opposite, a De Witt, and a Republican,—a sort of character which, rightly or wrongly, was then reprobated by the vast mass of the nation, and which could no more have achieved the Revolution of 1688 than it could have changed and reformed the dynasty of the Celestial Empire. But William III. was the first of our rulers that really solved the problem of constitutional monarchy; and since his solution of that problem the duties of our princes have been easy and natural. Before his time all was riddle and uncertainty, and the constitution not understood, because it had never properly been put into practice. If now and then he stumbled, it should be remembered that what to after sovereigns has been a plain, broad, and beaten path, was then an unexplored and dark passage, where nearly every step was an experiment. Our admiration of the ability, and the real genius in state affairs, of this illustrious Prince, must rise to the highest pitch if we look closely into the complicated nature and surpassing difficulties of his situation. A stadtholder in Holland with Republic forms—a King in England and Scotland, with constitutions which had never properly been defined—the ruler, in fact, of the Dutch, the English, the Scotch, and the Irish, who had all separate interests, jealousies, and animosities;—compelled, by the very constitution which he called into life or efficacy, to trust Ministers whom there was no trusting with safety,—engaged at the same time in an almost uninterrupted war with the greatest power in Europe, or undermined by the intrigues of that power, which was even more formidable in diplomacy than in arms,—and all this with a frail state of body!—We confess that, all these circumstances considered, we are lost in wonder as to the result, and disposed to give William III. by far the foremost place of all the sovereigns that have ever worn the English crown.”

NOVEMBER.

In this month there are scarcely any flowers left, but many trees are still beautiful, from the varying colours of their leaves and their ornamental fruit. Among the latter may be mentioned the spindle tree, the fruit of which is particularly beautiful, from its pink capsules opening so as to show the bright orange aril of the seed, which looks just dropping from it. The clusters of the bryony also exhibit beautiful shades of orange and scarlet, which are finely contrasted with the few remaining leaves. The arbutus at this season is also covered with its rich crimson strawberry-like fruit, hanging amidst its elegant evergreen leaves, and intermingled with a few remaining flowers, which look like pale waxen bells, or as Mrs. Meredith elegantly calls them, fairy lamps. The berberies are still hanging on their bushes; and the purple berries of the ivy, together with the scarlet ones of the pyracantha, still remain to afford food for the birds. Amongst the plants that are ornamental at this season, few are more conspicuously so than the traveller's joy (*Clematis vitalba*), whose light feathery seed vessels hang over the hedges like plumes of feathers waving to and fro with the wind. The cones of the pine and fir tribe are now very ornamental, and vary considerably both in the form and colour. Those of the spruce fir are of a deep purple, small and erect, and those of the cedar of Lebanon are yellowish. Some look reddish, and some green, and some are short and pointed, while others are long and drooping. The plane trees look remarkably well at this season, their bald-like seed vessels hanging on long foot stalks.

The dusk of the landscape is o'er,  
The brown leaves are shed on the way  
The dye of the lone mountain flower  
Grows wan and betokens decay.  
All silent the song of the thrush,  
Bewilder'd she cowers in the dale;  
The blackbird sits lone on the bush—  
The fall of the leaf they bewail.

Hogg.

Several very curious kinds of fungi are to be found at this season. One very peculiar kind grows out of the ground with a single stem, scarcely thicker in the cap part than at the base. It only springs up where there is decaying vegetable matter, and it is of a brilliant crimson. That very curious fungus called in Scotland siller cups (*Nidularia campanulata*) is found at this season. It consist



SILLER CUPS: NIDULARIA CAMPANULATA.

of a curious leathery cup, in which are a number of small theca, which contain the sporules, and each plant looks like a bird's nest with several eggs in it. It generally grows on a twig, or a bit of rotten wood, and one has been found in a pot, growing on a wooden tally, fixed in a pot containing a greenhouse plant. The curious plant called witches' butter (*Tremella arborea*), is found upon fallen trees, or any kind of dead wood in moist places. It forms roundish, somewhat turbinate, irregular masses, of a firm, gelatinous substance, lobed and wrinkled above, slightly plicate below, of a pale, whitish hue at first, but soon changing to brown, and eventually becoming black. It was called witches' butter, partly because it is of a soft, buttery substance, and partly because it was formerly supposed that throwing it into the fire of a dwelling house, would protect the inhabitants from witches. Several kinds of *Agaricus* may also be seen, some of which have blue stems, others orange, yellow, and green, with caps of various colours, some of which are scarlet or crimson, and others have beautiful shades of purple or violet. In short, nothing can exceed the variety of these curious plants—

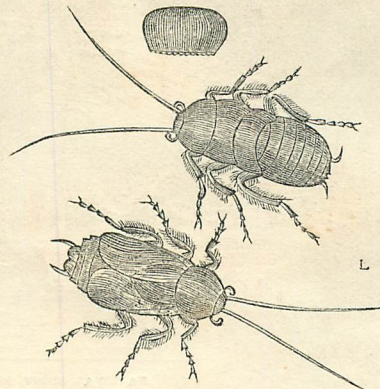
Whose tapering stems, robust or light,  
Like columns catch the searching light;  
Like fair umbrellas, fur'd or spread,  
Display their many-coloured head—  
Grey, purple, yellow, white, or brown,  
A Grecian shield, or prelate's crown,  
Like freedom's cap or friar's cowl,  
Or China's bright inverted bowl.

LEES.

The principal bird seen at this season is the snipe, though it generally leaves England about the latter end of this month. The snipe, from the nature of its food, requires a somewhat moist and cold climate. It lives principally upon earth-worms, which it finds by boring in the soft moist ground with its long beak. This beak is covered with nerves, so that it is as sensitive as the human hand. The bird also appears gifted with an extraordinary power of scent, as it scarcely ever bores in any place where it does not find a worm. Snipes are too shy to permit any one to approach near enough to observe their habits with the naked eye; but through a telescope they may be watched feeding in marshy ground near rivers, when it will be found that they strike their long bills almost up to the head into the soft mud, and almost always bring up a worm. The snipe generally draws its beak back with a jerk, and runs a few paces, holding the worm in its beak, before it swallows it; but as soon as the worm has disappeared, the snipe makes another plunge, and brings up another, and in this manner it eats an amazing quantity of worms, and sometimes slugs. The head of the snipe is admirably fitted for the manner in which the bird obtains its food. The head is heavy, and somewhat square in front, and the eyes, which are very large, are placed so far back in the head as to enable

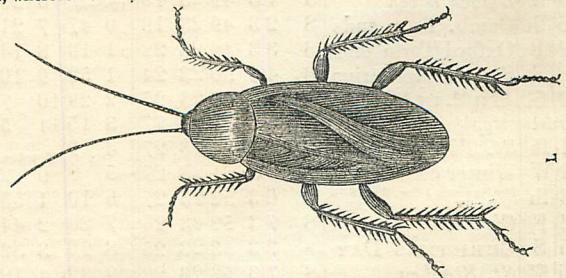
the bird to keep watch when its beak is plunged into the ground in search of food. The tip of the beak is soft and flexible, and the snipe can move it so as to take hold of any object in the ground, without unclosing the horny part of the bill. When hungry, the snipe is very active and so shy that it will not suffer any one to approach it, but after feeding it becomes more torpid, so that sportsmen when they go out to shoot these birds generally look for the marks left by the bird in boring, as they know that the snipe is not far off, and that it is probably sufficiently quiet to afford the chance of a good shot. The common wild pigeon or stock dove is a bird of passage in the south of England, seldom appearing before the end of November. They are very fond of the mast, or seed, of the beech tree. They generally appear in prodigious flights, and occasionally, in severe weather, they will join the domestic pigeons in a farm yard, though they may be easily distinguished by their smaller size and darker colour. It is said that this wild bird is the origin of all our tame pigeons. Some other kinds of birds migrate from the north to the south of Great Britain in this month. The water-wagtail is one of these birds, which generally visits marshy places on the southern coast in this month, returning back to the north about the beginning of March. Some of these birds, however, remain all the year in the southern and western parts of England. It has been often observed that when cows are feeding in low moist pastures, broods of wagtails are seen fluttering about them, in quest, no doubt, of the flies which are apt to annoy animals in such situations. They are also found, in country places, on the sills of windows, to catch the flies that are generally found in such places. The grosbeak, or hawfinch, usually visits England in this month. It feeds principally upon the fruit of the common hawthorn, breaking the hard seeds with the greatest facility. It feeds also upon other seeds, and the stones of various kinds of fruit.

There are scarcely any insects to be found in the open air in this month; but the dampness and chilliness of the weather inducing larger fires to be kept up,



BLATTA ORIENTALIS.

kitchens and the lower parts of houses are frequently infested by what are commonly called black beetles, but which are not properly beetles, but a kind of cockroach (*Blatta orientalis*), and it is, therefore, nearly allied to the cricket and grasshopper. All the insects belonging to this class are very destructive, as they continue eating through all their transformations. The female black beetle does not lay her eggs singly, but always sixteen at a time, and these eggs are enclosed in a capsule which resembles an oblong snuff-box or small box. The mother carries this capsule about with her for a long time, the half of it protruding from her body, until by degrees the sides of it have attained a proper firmness. The outer part of this capsule is at first white, but by degrees becomes brown. If this receptacle for the eggs is more closely examined, it will be seen that one of the two longer margins is very finely toothed, and is composed of two layers, and so constructed that the teeth of one of the layers easily go into the spaces between the teeth of the other layer. This margin is also so firmly united by means of a gummy substance, that it might be easier opened at any other part than at the toothed edge. As soon as the young are hatched and have quitted the egg, they emit a fluid from their mouths, by which they soften the cement that united the two layers of the capsule together, and thus they contrive to open the door of their prison-house. The anxious mother lays the capsule containing her eggs on clothes, leather, and even on walls, taking abundant care to cover it with a portion of the same kind of material as that on which she has laid it. She even carries this feeling so far as to scrape the lime from the wall, and to spread it over the capsule. Black beetles are fond of warm places, and they are found in the greatest abundance in kitchens and bake-houses. Their favourite food is bread and flour; but they will eat almost anything. They avoid the light and hide themselves in dark places during the day, but they come out of their hiding-places in the evening to feed. The wings and wing-cases of the male are one-third shorter than the body. The female is without wings, and has only very short rounded wing-cases, which are separated from each other. The Germans have a cockroach, which is still more troublesome than ours. It is smaller than the common black beetle, and of a dirty yellow colour. These creatures are excessively troublesome, and will even eat the blacking off boots. The American cockroach (*Blatta americana*), is red, and it is nearly twice as large as the black beetle. It has large wings, and very long antennae. It has been brought to England by the American ships, and as, wherever it has been introduced, it has destroyed the oriental cockroach, it



BLATTA AMERICANA.

will probably, in the course of a few years, as completely extirpate the ordinary kind as the Hanoverian rats have extirpated those of Norway. The American cockroach is a most voracious feeder, and as it is particularly fond of sugar, it is frequently found in the shops of grocers and other persons who deal in that commodity. The female of the American cockroach is much larger than the male; and she has very large wings, and tremendously long horny antennae.



NATIONAL SPORT, SWITZERLAND—  
CHAMOIS HUNT

M	D	ANNIVERSARIES, OCCUR- RENCES, FESTIVALS, &c.	SUN.			MOON.			DURATION OF MOONLIGHT.			HIGH WATER		EQUA- TION OF TIME.	Day of the Year.
			Rises.	Sets.	DECLINA- TION NORTH.	Rises.	Souths.	Sets.	Before Sunrise.	After Sunset.	Moon's Age.	Morning	Afternoon		
			H. M.	H. M.	Deg. Min.	H. M.	H. M.	H. M.	O'Clock.	O'Clock.		H. M.	H. M.	M. S.	
1	W	The Pleiades souths 10h. 57m. r.m., 62 deg. high	7 46	3 52	21 46	0 49					23	8 40	9 15	10 53	335
2	Th	α Andromedæ souths at 7h. 15m.	7 47	3 52	21 56	1 52	7 48	1 35			24	9 45	10 20	10 31	336
3	F	γ Pegasi souths at 7h. 18m.	7 48	3 51	22 4	2 55	8 31	2 0			25	10 50	11 25	10 7	337
4	S	α Arietis souths at 9h. 5m.	7 49	3 51	22 13	3 55	9 14	2 25			26	11 55		9 43	338
5	M	2ND S. IN ADVENT	7 51	3 51	22 21	5 0	10 0	2 54			27	0 15	0 40	9 18	339
6	S	St. Nicholas	7 52	3 51	22 28	6 2	10 47	3 27			28	0 57	1 20	8 53	340
7	Tu	α Ceti souths at 9h. 50m. r.m.	7 53	3 50	22 35	7 2	11 36	4 7			29	1 35	1 55	8 28	341
8	W	Rigel souths at 11h. 59m. r.m., 30 deg. high	7 55	3 50	22 42	7 59		4 54			1	2 10	2 30	8 1	342
9	Th	Year 1264 of the Mohammedan era commences	7 56	3 50	22 48	8 51	1 19	5 48			2	2 50	3 5	7 35	343
10	F	Grouse shooting	7 57	3 49	22 54	9 37	2 11	6 48			3	3 25	3 45	7 7	344
11	S	ends Capella souths at 11h. 45m.	7 58	3 49	22 59	10 18	3 4	7 56			4	4 0	4 20	6 40	345
12	S	3RDS. IN ADVENT	7 59	3 49	23 4	10 54	3 56	9 7			5	4 40	5 0	6 12	346
13	M	β Tauri souths at 11h. 45m.	8 0	3 49	23 9	11 24	4 47	10 21			6	5 25	5 45	5 44	347
14	Tu	John Claudius London, the Botanist died, 1843	8 0	3 49	23 13	11 53	5 38	11 35			7	6 10	6 35	5 15	348
15	W	Ember Week	8 1	3 49	23 16		6 29				8	7 0	7 30	4 46	349
16	Th	Camb. Term ends	8 2	3 49	23 19	0 47	7 21	0 51			9	8 5	8 40	4 17	350
17	F	Oxford Term ends	8 3	3 49	23 22	1 19	8 14	2 7			10	9 15	9 50	3 48	351
18	S	Sun in Sagittarius	8 4	3 50	23 24	1 52	9 10	3 24			11	10 30	11 5	3 18	352
19	S	4TH S. IN ADVENT	8 5	3 50	23 25	2 29	10 7	4 40			12	11 35		2 49	353
20	M	The Sun rises 4 deg. S. of S.E. by E.	8 5	3 51	23 27	3 15	11 5	5 53			13	0 8	0 35	2 19	354
21	Tu	St. Thomas	8 6	3 51	23 27	4 9		6 59			14	1 0	1 30	1 49	355
22	W	Winter commences	8 6	3 51	23 27	5 8	0 2	7 56			15	1 54	2 20	1 19	356
23	Th	The Sun sets 4 deg. S. of S.W. by W.	8 6	3 52	23 27	6 10	1 53	8 45			16	2 40	3 5	0 49	357
24	F	Christmas Eve	8 7	3 52	23 26	7 20	2 44	9 26			17	3 25	3 50	0 19	358
25	S	CHRISTMAS DAY	8 7	3 53	23 25	8 26	3 32	9 59			18	4 10	4 30		359
26	S	St. Stephen	8 7	3 53	23 23	9 32	4 18	10 28			19	4 50	5 10	Add 0 40	360
27	M	St. John the Evan.	8 8	3 54	23 21	10 35	5 1	10 54			20	5 30	5 50	1 10	361
28	Tu	Innocents Day	8 8	3 55	23 19	11 38	5 44	11 18			21	6 9	6 30	1 40	362
29	W	Sun in Capricorn.	8 9	3 56	23 16		6 26	11 40			22	6 50	7 10	2 9	363
30	Th	α Orionis souths at 11h. 12m. r.m., 46 deg. high	8 9	3 57	23 12	0 40	7 9				23	7 35	8 5	2 38	364
31	F	St. Silvester	8 9	3 58	23 8	1 43	7 53	0 28			24	8 35	9 10	3 7	365

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## DECEMBER.

THE MOON rises after midnight and before noon from the 1st to the 14th; between noon and midnight between the 14th and the 28th; and after midnight on the 29th and 30th. She sets before midnight till the 14th, and after midnight from that day.

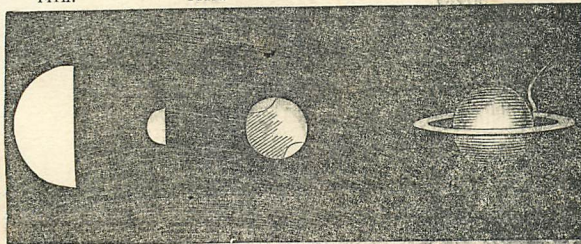
On the 1st at 11h. A.M., she is on the Equator, and going S.; from the 1st to the 4th in Virgo, her crescent is seen on the morning of the 3rd, a few deg. N.W. of Spica Virginis. On the 4th and 5th, she is in Libra; on the 7th, at 8h. 31m. P.M. of Spica Virginis. On the 10th and 11th, she is in Libra; on the 12th, at 8h. 31m. P.M. of Spica Virginis. On the 14th and 15th, she is in Libra; on the 16th, at 8h. 31m. P.M. of Spica Virginis. On the 17th, she is seen several degs. W. of the line joining Alpha Arietis and Alpha Ceti; and on the 18th, she is E. of the same line. On the 17th and 18th, she is in Aries; on the 19th, 20th, and 21st, in Taurus, passing at some distance below the Pleiades; she is seen W. of Aldebaran on the 19th; and E. of it on the 20th; approaching the Milky Way, which she crosses during the 21st, on which day at 10h. 8m. P.M., she is full, but without an eclipse, as she is then 5 degs. from the line joining the Sun and Earth produced to the Moon. On the 21st, she is in Gemini; on the 23rd and 24th, she is in Cancer; on the former day she is W., and on the latter E. of the line joining Pollux and Procyon; on the 25th, 26th, 27th, and 28th, she is in Leo, being W. of Regulus to the 26th, and E. of it afterwards. On the 28th, at 8h. P.M., she is on the Equator going S., and to the end of the month she is in Virgo; on the 29th, at 1h. 48m., she enters her last quarter.

MERCURY will be in the constellation of Libra till the 3rd; in Scorpio from the 4th to the 18th, on which day he passes into Ophiuchus and remains there till the end of the year.

He rises on the 1st, at 6h. 33m. A.M.; on the 6th, at 6h. 1m., (the Moon rising at the same time); on the 11th, at 5h. 54m.; on the 16th, at 6h. 3m.; on the 21st, at 6h. 19m.; and on the 26th, at 6h. 39m. A.M.; preceding the times of sunrise by 1h. 13m., 1h. 51m., 2h. 4m., 1h. 59m., 1h. 57m., and 1h. 28m. respectively. These intervals of time are larger than any other during the year; this month, therefore, is very favourable for observing this Planet.

### APPEARANCE OF

VENUS ON THE 14TH. MERCURY ON THE 14TH. MARS AND SATURN DURING THE MONTH.



Scale 40'' of arc to an inch.

On the 1st, he rises midway between E.S.E. and S.E. by E.; on the 23rd, S.E. by E., and after this time a little S. of the latter point. He is moving W. among the stars till the 5th, and E. after this day. He is situated on the 1st, in a line drawn from Antares through Beta Scorpio produced 4°, and he is 13° N.W. of the former star. On the 5th, he is in the same line, but at 6° distance from Beta Scorpio, and 15° from Antares; he then moves E., and on the 10th, is situated as on the 1st; on the 14th, he is 1° N. of Beta Scorpio; on the 19th, he is 6° N. of Antares; on the 26th, he is 14° E. of Beta Scorpio; and 10° N.E. of Antares; on the last day he is 17° from Antares, and in a line drawn from the Pole Star through Alpha Ophiuchi, produced 36°. The Moon is near to Mercury on the morning of the 6th, being only 1° N. of the Planet.

VENUS will be in the constellation of Virgo till the 15th, and in that of Libra after that day.

She is the morning star all the month; and rises at 3h. 20m. A.M. on the 1st; at 3h. 30m. A.M. on the 11th; at 3h. 48m. A.M. on the 21st; and at 4h. 8m. A.M. on the last day; at the S. by E. on the 1st, and on the 30th; at the E.S.E. points of the horizon, during the month the points of the horizon where she rises are between these.

During the month she souths at about 8h. 50m. A.M., on the 1st, at an altitude of 32°, and on the last day, at an altitude of 23°.

On the 1st, she is a few deg. N.E. of Spica Virginis; on the 12th, she is in the line produced joining the Pole Star and Arcturus, and at the distance of 30° S. of the latter star; and at 13° distance E. of Spica Virginis.

On the 21st, she is 3° N. of Alpha Libra; and on the last day she is in a line joining the Pole Star and Alpha Corona Borealis, and 43° distance from the latter star.

During the morning of the 3rd day, the Moon and Venus are very near together; the Planet is a very little N. of the Moon.

MARS will be in the constellation Aries throughout the month. He sets ear the W.N.W. On the 1st, at 4h. 25m. A.M.; on the 15th, at 3h. 36m. A.M.; and on the last day, at 2h. 56m. A.M. He souths at 8h. 13m. P.M. on the 1st; at 8h. 22m. on the 15th; and at 7h. 33m. on the 31st, at an altitude of 51, 52, and 53° respectively. To December 7th, he is stationary among the stars, and he is 15° S. of Alpha Arietis; on the 18th, he is 9° S. of Alpha Arietis; and after this time he moves E. from that star. He is a bright and conspicuous object throughout the month.

JUPITER will be in the constellation Gemini. He rises near the N.E. by N.; on the 1st, at 6h. 36m. P.M., and on the last at 4h. 23m. P.M. He souths on the same days at 2h. 48m., and at 0h. 36m. A.M., at an altitude of 61° on every day.

During the month he is moving slowly westward, and away from Castor and Pollux; at the end of the month he is 11° from the former, and 8° from the latter. The Moon passes him at 6h. in the morning of the 23rd.

SATURN rises and sets at the same points of the horizon, and souths at the same altitude as in last month. He rises a little after noon at the beginning, and before noon at the end of the month. He souths at 5h. 56m. P.M. on the 1st, and at 4h. 6m. P.M. on the 31st; and 9h. 16m. P.M. on the same days respectively. His motion among the stars is slowly towards the E., and he is situated as in last month. The Moon passes him at 4h. in the morning of the 14th.

URANUS sets at 3° S. of W. by N.; on the 1st, at 2h. 48m. A.M., and on the 31st, at 0h. 45m. A.M. He souths on the 15th day at 7h. 18m. P.M. The Moon passes him during the afternoon of the 16th.

### TIMES OF THE SOUTHING, &c. OF THE PRINCIPAL FIXED STARS WHICH PASS THE MERIDIAN BEFORE MIDNIGHT.

Stars Names.	Magnitude	Time of southing during the evening of the 1st day.		Height in degrees above the horizon S (South) N (North)	Setting.	
		H.	M.		Number of hours from southing.	Point of the horizon.
Alpha Cephei	3	4	35	79°N	Never Sets	
Epsilon Pegasi	2	4	57	48s	6½	Near W. by N.
Formalhaut	1	6	9	8s	2½	S.W. by S.
Alpha Pegasi.	2	6	17	24s	7½	W.N.W.
Alpha Andromedæ	1	7	20	67s	8½	Near N.W.
Gamma Pegasi	2	7	25	53s	7½	W.N.W.
Alpha Cassiopeæ	3	7	51	86N	Never Sets	
Alpha Arietis	3	9	18	61s	8½	Near W.S.W.
Alpha Ceti	1	10	13	42s	6½	Between W. and W. by N.
Alpha Persei	2	10	32	88s	Never Sets	
Aldebaran	1	11	46	55s	7½	Near W.N.W.

### POSITION OF THE CONSTELLATIONS RISING, ON THE MERIDIAN, AND SETTING ON THE 1st. DAY AT 10h. P.M.

Constellations Rising.	Constellations on the Meridian	Constellations Setting.
Canes Venatici N.N.E.	Draco, 10° above the N horizon	The legs of Hercules in N.W. by W.
Leo E.N.E.	Ursa Minor 35° above the N horizon	Sagitta in W.N.W.
The head of Hydra E.	Polaris	Aquila in W.N.W.
The flank of Monoceros E. by S.	Perseus between Polaris and the Zenith	The legs of Aquarius in S.W. by W.
The head of Canis Major S.E. by E.	Aries 55° above the S. horizon	
Lepus S.E. by S.	The head of Cetus 40° above the S. horizon	

Days of the Month.	Length of Day, or number of hours between sunrise and sunset.	Number of Hours and Minutes the day has decreased since Longest Day. Increased since shortest Day.		Time of Day break, or beginning of Twilight.	Time of Twilight ending.	JUPITER'S SATELLITES.										OCULTATIONS OF STARS BY THE MOON.				
						Eclipses of										Names of the Stars.	Magni- tude.	Times of disappearance and re-appearance of the Star.	At the dark or bright limb of the Moon.	
						1st. Sat.					2nd. Sat.									
						Emerison.					Emerison									
						D.	H.	M.	D.	H.	M.									
1	H. M. 8 6	H. M. 8 28	H. M. 5 42A.M.	H. M. 5 56P.M.	D. H. M. 4 6 52 A.M.									e Piscium	5	16 6 46 P. M.			Dark	
6	7 59	8 35	5 47 "	5 56 "	6 1 20 "														Bright	
11	7 51	8 43	5 51 "	5 56 "	7 7 48 P.M.									Lambda Geminorum	5	23 3 59 A. M.			Bright	
16	7 47	8 47	5 55 "	5 56 "	14 9 42 "														Dark	
21	7 45	The Shortest Day	5 59 "	5 58 "	20 5 7 A.M.															
26	7 46	0 1	6 1 "	5 59 "	21 11 36 P.M.									11 Sextantis	6	26 4 22 A. M.			Bright	
31	7 49	0 4	6 2 "	6 5 "	23 6 4 "														Dark	
					27 7 1 A.M.									Pi Leonis	4	26 5 52 A. M.			Bright	
					29 1 30 "														Dark	
					30 7 58 P.M.															

### TIMES OF CHANGES OF THE MOON,

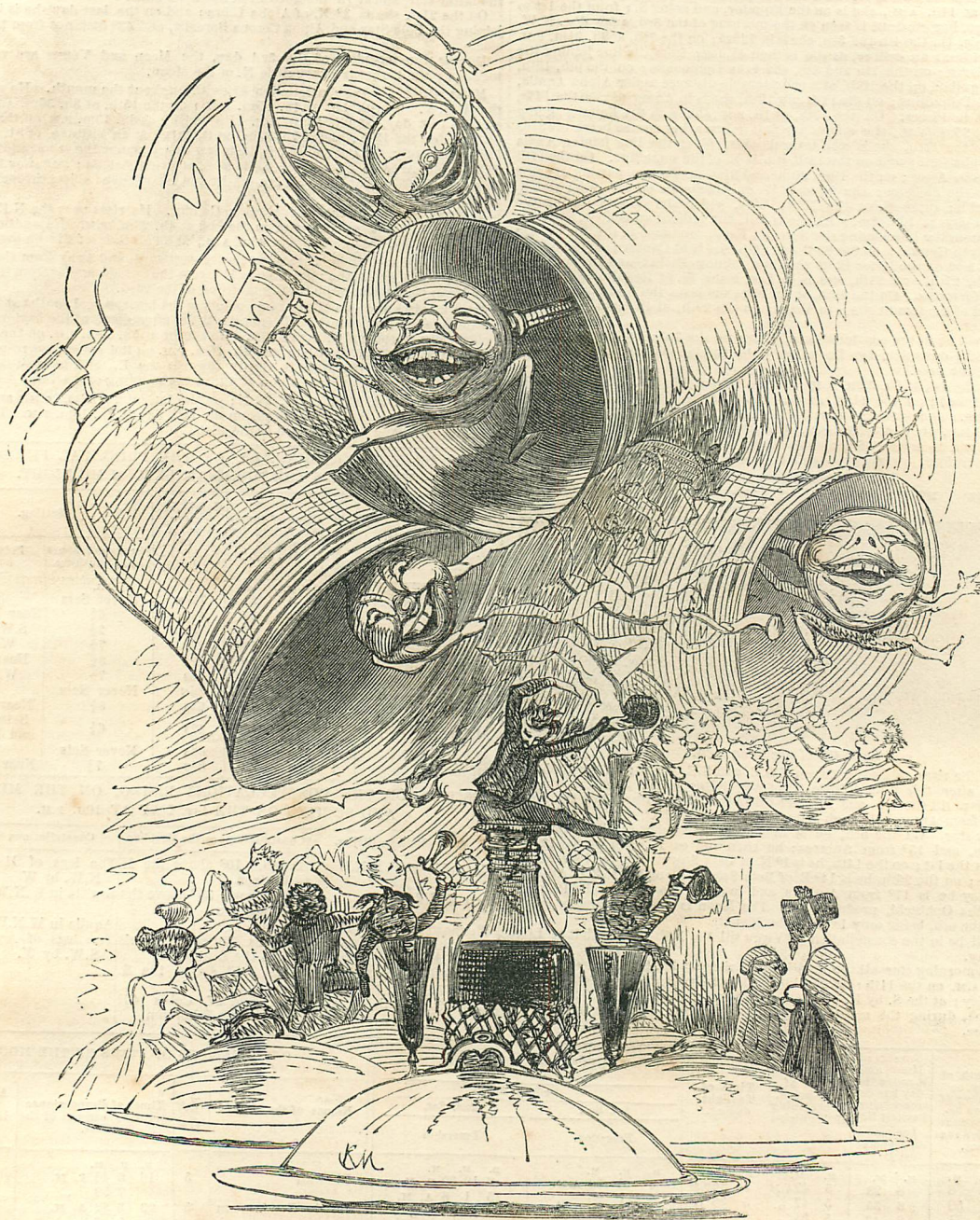
And when she is at her greatest distance (Apogee), or at her least distance (Perigee), from the Earth, in each Lunation.

	7D. 8h. 31m. P.M.
NEW MOON ..	15 3 26 A.M.
FIRST QUARTER ..	21 10 8 A.M.
FULL MOON ..	29 1 48 P.M.
LAST QUARTER ..	6 2 P.M.
APOGEE ..	18 1 P.M.
PERIGEE ..	30 10 A.M.

### RIGHT ASCENSIONS AND DECLINATIONS OF THE PLANETS.

Days of the Month.	MERCURY.		VENUS.		MARS.		JUPITER.		SATURN.		URANUS.	
	Right Ascension	Declination South.	Right Ascension	Declination South.	Right Ascension	Declination North.	Right Ascension	Declination North.	Right Ascension	Declination South.	Right Ascension	Declination North.
1	15h. 43m.	17° 22'	13h. 26m.	6° 53'	11h. 54m.	12° 15'	7h. 25m.	22° 7'	22h. 36m.	10° 53'	0h. 55m.	5° 8'
6	15 36	16 33	13 44	8 15	11 54	12 27	7 23	22 11	22 37	10 48	0 54	5 6
11	15 45	17 16	14 3	9 43	11 55	12 44	7 21	22 16	22 38	10 41	0 54	5 5
16	16 5	18 46	14 23	11 15	11 58	13 6	7 19	22 21	22 39	10 34	0 54	5 4
21	16 30	20 27	14 43	12 47	2 1	13 33	7 17	22 26	22 40	10 27	0 54	5 3
26	16 58	22 0	15 5	14 17	2 6	14 3	7 14	22 32	22 41	10 18	0 54	5 3

December Anniversary.



MERRY CHRISTMAS.—DRAWN BY KENNY MEADOWS.

THE ENGLISH CHRISTMAS HOME.\*

A loud and laughing welcome to the merry Christmas bells !  
 All hail, with happy gladness, to the well-known chaunt that swells  
 We list the pealing anthem chord, we hear the midnight strain,  
 And love the tidings that proclaim Old Christmas once again.  
 But there must be a melody of purer, deeper sound,  
 A rich key-note, whose echo runs through all the music round;  
 Let kindly voices ring beneath low roof or palace dome,  
 For these alone are carol chimes that bless a Christmas Home

CHORUS.

Then fill once more from Bounty's store red wine or nut-brown foam,  
 And drink to kindly voices in an English Christmas Home !

A blythe and joyous welcome to the berries and the leaves  
 That hang about our household-walls in dark and rustling sheaves :  
 Up with the holly and the bay, set laurel on the board,  
 And let the mistletoe look down while pledging-draughts are poured.  
 But there must be some hallowed bloom to garland with the rest,—  
 All, all must bring toward the wreath some flowrets in the breast ;  
 For though green boughs may thickly grace low roof or palace dome,  
 Warm hearts alone will truly serve to deck a Christmas Home !

CHORUS.

Then fill once more from Bounty's store red wine or nut-brown foam,  
 And drink to honest hearts within an English Christmas Home !

\* The Poetry by Eliza Cook. The Music by Vincent Wallace, Composer of the Opera of "Maritana," appeared in the ILLUSTRATED LONDON NEWS, December 20, 1845.

## DECEMBER.

Among the few plants that are ornamental at this season, one of the most conspicuous is the holly, the beautiful red berries of which look particularly brilliant from the want of ornament in most of the other trees and shrubs.

O reader, hast thou ever stood to see  
The holly tree?  
The eye that contemplates it well, perceives  
Its glossy leaves  
Order'd by an intelligence, so wise  
As might confound the Atheist's sophistries.

Below a circling fence its leaves are seen,  
Wrinkled and keen;  
No grazing cattle through their prickly round  
Can reach to wound;  
But as they grow where nothing is to fear,  
Smooth and unarm'd the pointless leaves appear.

Thus, though abroad perchance I might appear  
Harsh and austere,  
To those who on my leisure would intrude  
Reserv'd and rude;  
Gentle at home amid my friends I'd be,  
Like the high leaves upon the holly tree!

The holly and the mistletoe, it is well known, are used to decorate houses at Christmas; but very few people are aware of the origin of the custom. The holly was dedicated to Saturn; and, as the *fêtes* of that deity were celebrated in December, and the Romans were accustomed to decorate their houses with holly, the early Christians decorated their houses in the same manner, while they were celebrating their festival at Christmas, in order that they might escape observation. The mistletoe was dedicated to Friga, the Venus of the Scandinavians, and, as she was the goddess of love, it was formerly a custom to kiss under the mistletoe.

As at this season, the leaves have generally fallen, the peculiarities in the growth of trees are more perceptible. Amongst others, may be observed occasionally that curious mode of growth called inosculation, where two trees unite together, or where a branch crossing a trunk, becomes united to it. There are

And should my youth, as youth is apt, I know,  
Some harshness show,  
All vain appetites I lay by day  
Would wear away.  
Till the smooth temper of my age should be  
Like the high leaves upon the holly-tree.

And as, when all the summer trees are seen  
So bright and green,  
The holly-leaves their fadeless hues display  
Less bright than they;  
But, when the bare and wintry woods we see,  
What then so cheerful as the holly-tree?

So serious should my youth appear among  
The thoughtless throng;  
So would I seem amid the young and gay,  
More grave than they;  
That in my age as cheerful I might be  
As the green winter of the holly-tree.

SOUTHEY.



AN INOSCULATED BEECH.

several examples of trees of this kind in Epping Forest; and it is said that it was observing this curious manner of growth that gave the first idea of grafting. In the gardens, the laurustinus is generally in flower; as also the newly-introduced *Garrya elliptica*, with its long, drooping spikes of flowers, which bear some resemblance to those of *Love-lies-bleeding*, but are of a lighter texture, and of a pale green colour. *Chimonanthus fragrans* now opens its pale-yellowish, buff-coloured flowers, which have a delightful fragrance. In the green-houses the camellias are in all their beauty; as are the chrysanthemums, both in the open air and under glass.

The principal bird deserving notice is the woodcock, which generally appears in this country about the latter end of November, or the beginning of December. As woodcocks live in the same manner as snipes, sportsmen guess where they are to be found by the perforations or borings made by their bills in the ground. Woodcocks are naturally very shy birds, rarely taking wing by day, unless disturbed; but in the evening, all, as if by common consent, quit the woods nearly at the same instant, and wander over the snow-covered meadows in search of moist places, for food, retiring to their hiding places just at the dawn of day. The bill of the woodcock, like that of the snipe, is furnished with nerves that render it exceedingly sensitive; and the tip is also so flexible, that it can easily pick up a worm, or even a small insect, without opening the bill. "The enormous quantity of worms that these birds eat," Ronnie observes, "is scarcely credible; indeed, it would be the constant labour of one person to procure such food for two or three woodcocks." The woodcock is so much like the snipe when seen at a little distance, that it would be difficult to distinguish between them, were it not for the habit which the woodcock has, in rising from the ground, of throwing up its tail feathers in the same way as the peacock does its tail, when the white tips of the woodcock's tail feathers distinguish it from the snipe, the tail of which is dark brown. The redbreast, the wren, the hedge-sparrow, and the tomtit are almost the only small birds seen in the open air at

this season, and they are generally found in the neighbourhood of dwelling-houses, picking up any particles of food they can find. If the weather should be mild, the hedge-sparrow may sometimes be heard singing, even in the middle of December.



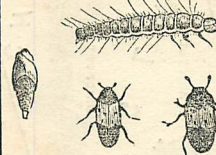
AN INOSCULATED OAK.

Very few living insects are to be met with in the open air in this month, though those which infest dwelling houses are often in a state of great activity. One whose ravages are very extensive, is the bacon beetle, or weevil as it is generally termed (*Dermestes lardarius*).

The larva of this insect is particularly partial to the skin of any animal that falls in its way; and consequently it destroys stuffed animals and birds in collections of natural history, whenever it can gain access to them. It attacks hams and bacon for their skin, but as it is very glutinous it extends its ravages to the flesh. The larva is long and slender, its body being nearly round, and consisting of thirteen segments, which are blackish brown in the middle and white at the edge. The whole body is furnished with bristles.

The beetle is black at the head and tail, with an ash-grey band across the back, having three black spots on each wing case. Sometimes this band takes a yellowish tinge, and the whole beetle is furnished here and there with tufts of ash-grey or yellowish-grey hairs. The beetle is frequently seen in December and January, but the weevils are most destructive in spring. The larvæ are very seldom seen, as they conceal themselves in the bodies they attack, and their presence can only be guessed by finding occasionally their cast-off skins, as they change their skins several times while in their larvæ state. Whenever, therefore, little rolls of black skin are found near the places where ham and bacon are kept, or in cases containing objects of natural history, it is probable the bacon beetle has attacked them, and a careful examination should be made to endeavour to discover and destroy the larvæ. Search may also be made for the clothes moth during this month, as, though it generally passes the winter in a torpid state, if its eggs are found and destroyed, it will prevent the mischief the caterpillar would otherwise do in spring. The common clothes moth generally lays its eggs on the woollen or fur articles it intends to destroy; and when its larva appears, it begins to eat immediately, and, with the hairs or wool it has gnawed off, it forms a silken case or tube, under the protection of which it devours the substance of the article on which it has fixed its abode. This tube is of parchment-like consistence, and quite white. It is cylindrical in its shape, and furnished at both ends with a kind of flap, which the insect can raise at pleasure, and crawl out; or it can project the front part of its body with its fore feet through the opening, so as to crawl about without removing the rest of its body from the tube, which it drags about with it. There are several kinds of clothes moths, and the caterpillars of some of them bury themselves in the article on which they feed, instead of making themselves a silken tube. The moths also differ very much in appearance: the commonest kind is of a light buff; but one species (*Tinea tapetella*) is nearly black, with the tips of its larger wings white, or pale grey.

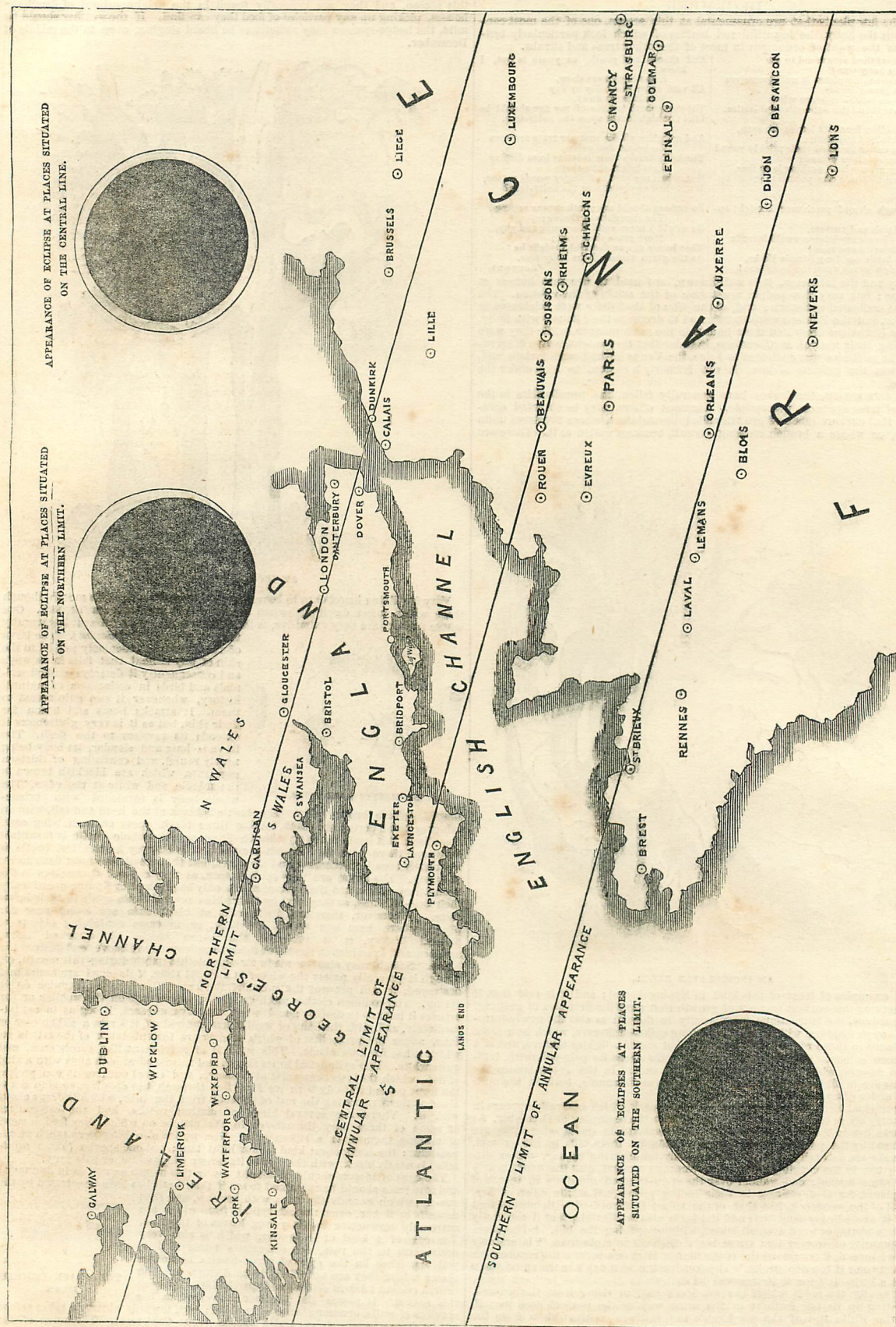
The eggs of insects should be sought for in this month as well as in January; and rose trees should be examined to see if their bark has been penetrated by the saw-fly, which wounds the bark with her saw, and then deposits in it her eggs, the caterpillars from which are extremely destructive to the young leaves of the rose. The eggs of a kind of leaf-roller, which is also very destructive to the rose, are sometimes found in little yellow patches on the glass of green-houses, and other places where they are not likely to be disturbed. The hearth cricket (*Acheta domestica*) is particularly lively at this season. It passes the summer concealed in the crevices of walls, or among heaps of rubbish; but, towards winter, it takes refuge in the house, where it generally breeds about Christmas. The noise of the cricket is made by its wings.



DERMESTES LARDARIUS.



THE BLACK CLOTHES-MOTH



# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## HIGH WATER.

A TABLE of the difference between the Times of High Water at London Bridge and at the chief Ports and Places in Great Britain and Ireland, as formed from local Tide Tables, and the best works on Navigation:—

### COAST OF ENGLAND.

	H.	M.		H.	M.
St. Agnes Lights	Add	2 23	Hull	Add	3 53
Aldborough	..	8 38	Humber River Entrance	..	3 23
Alderney Island	..	4 38	Ipswich	..	9 53
Arundel	..	9 8	Lands-end	..	2 23
Barnstaple Bar	..	3 23	Liverpool Dock	..	9 15
Beachy Head	..	9 43	Lynn Deepes	..	3 58
Bridgewater	..	4 38	Margate Pier	..	Subt. 2 2
Bridlington	..	2 23	Newcastle	..	Add 1 53
Bridport	..	3 53	Newhaven	..	9 43
Brighton	..	9 31	Nore Light	..	Subt. 0 58
Bristol	..	5 8	Orfordness	..	Add 8 33
Chatham	..	Subt. 1 13	Penzance	..	2 23
Chichester Harbour	Add	9 23	Plymouth Dock-yard	..	3 26
Coquet Island	..	0 38	Portland Roads	..	4 9
Cromer	..	3 49	Portsmouth Dock-yard	..	9 33
Cornwall Cape	..	2 23	Ramsgate Harbour	..	9 13
Cuckold's Point	Subt.	0 6	Rye Harbour	..	8 33
Dartmouth Harbour	Add	3 58	Scarborough	..	2 18
Deal	..	9 8	Scilly Islands	..	Subt. 1 25
Dover Pier	..	9 3	Sheerness Dock-yard	..	Add 0 63
Downs (Stream)	..	0 38	Shields	..	9 8
Dungeness	..	8 43	Shoreham Harbour	..	9 33
Eddystone Lighthouse	..	3 8	Southampton	..	7 23
Exmouth Bars	..	4 18	Spithead (Stream)	..	3 13
Falmouth	..	3 8	Spurn Lights	..	0 53
Flamborough Head	..	2 23	Sunderland	..	3 58
Foreland (North)	..	9 33	Torbay	..	0 43
Foreland (South)	..	9 8	Tynemouth Bar	..	4 23
Gravesend	Subt.	0 37	Weymouth	..	1 38
Guernsey Pier	Add	4 23	Whitby	..	Subt. 2 51
Harwich	..	9 23	Whitehaven	..	6 33
Hastings	..	8 29	Yarmouth Roads	..	

### COAST OF WALES.

	H.	M.		H.	M.
Aberdov	Add	5 25	Cardigan Bar	Add	4 53
Aberystwith	..	5 23	Caernarvon Bar	..	7 13
Barmouth	..	5 48	Holyhead Bay	..	7 53
Beaumaris	..	8 19	Milford Haven	..	3 38
Carmarthen Bar	..	4 3	Pembroke Dockyard	..	3 57
Caldy Island	..	3 53	Swansea Bay	..	3 47

### COAST OF SCOTLAND.

	H.	M.		H.	M.
Aberdeen Bar	Subt.	0 56	Kirkcudbright	Add	9 8
Arran Island	Add	9 8	Leith Pier	..	0 15
Banff	Subt.	1 26	Lerwick Harbour	..	8 23
Cantyre (Mull)	Add	6 52	Lewis Island	..	3 53
Cromarty	..	9 38	Montrose	Subt.	0 22
Dee River	..	10 38	Pentland Frith	Add	8 23
Dunbar	..	0 13	Perth	..	3 21
Duncansby Head	..	6 8	Peterhead	Subt.	1 22
Dundee	..	0 18	Port Glasgow	Add	9 38
Eyemouth	..	0 8	Port Patrick	..	8 54
Galloway (Mull)	..	9 8	Stromness	..	6 53
Greenock	..	9 38	Tay Bar	Subt.	0 2
Inverness	..	9 53	Wick	Add	9 9

### COAST OF IRELAND.

	H.	M.		H.	M.
Achill Head	Add	3 53	Dublin Bar	Add	9 5
Bally Shannan Bar	..	3 23	Dundalk Bar	..	8 53
Baltimore	..	1 38	Dungarvon	..	2 23
Bantry Bay	..	1 39	Galway Bay	..	2 23
Belfast	..	7 58	Horth Harbour	..	9 1
Carlingford Bar	..	8 33	Killybegs	..	4 37
Cape Clear	..	1 53	Kingstown Harbour	..	9 6
Carrickfergus	..	8 22	Kingsale Harbour	..	2 23
Cork Harbour	..	2 23	Londonderry	..	3 54
Dingle Bay	..	1 23	Shannon Mouth	..	1 43
Donaghadee Pier	..	7 8	Sligo Bay	..	3 52
Donegal	..	2 58	Tralee Bay	..	1 38
Downing's Bay	..	3 13	Waterford Harbour	..	3 43
Drogheda	..	8 34	Wexford Harbour	..	5 22

### COAST OF THE ISLE OF MAN.

	H.	M.		H.	M.
Air Point	Add	9 0	Douglas Harbour	Add	9 3

### COAST OF THE ISLE OF WIGHT.

	H.	M.		H.	M.
Cowes	Add	8 38	Needles Point	Add	7 38
Dunnose	..	7 4	Yarmouth	..	7 24
Newport	..	..	..	Add	9 59

To find the time of High Water at any of these places we must proceed as follows:—Find the Time of High Water at London Bridge as given in the Calendar, and add the number opposite to the given place, or subtract it according as it has Add or Subt. prefixed to it; and the sum or difference is the time of High Water at that place. Attention must be paid to the following Notes:—

I. When the two numbers are added, if the sum be more than 12 hours, reject the 12 hours, and the remainder is the time of High Water in the afternoon, if the morning tide at London Bridge was taken, or the next day's morning tide, if the afternoon tide at London Bridge was taken.

II. If the interval at the given place is to be subtracted, and is greater than the time of High Water at London Bridge, increase the time at London Bridge by 24h., and then subtract, and the remainder is the time of High Water at the given place in the morning, if the afternoon tide at London Bridge was taken, or in the afternoon of the preceding day, if the morning tide was taken.

EXAMPLES.—At what times, on January 1st, is it high water at St. Agnes Lights?

The times of high water at London } 1h. 42m. A.M., and 2h. 6m. P.M. { in the al-  
 Bridge on that day are .. .. manack  
 St. Agnes Lights (from table) add 2h. 23m. .. 2h. 23m.

The sum is the time of high water.. 4h. 5m. { morn- } 4h. 29m. afternoon  
 .. .. ing

Ex. 2.—At what times at Aldborough, on January 6th?

The times of high water in the } 4h. 51m. morning and 5h. 9m. afternoon  
 Almanack are .. ..  
 Aldborough (from table) add 8h. 38m. .. 8h. 38m. ..

13h. 29m.

13h. 47m.

Reject 12h. in both cases, according to Note I; and the times are 1h. 29m. on the afternoon of the 6th, and 1h. 47m. in the morning of the 7th.

To find the time of first high water on January 6th, it will be necessary to use the time in the Almanack for the afternoon of the 5th.

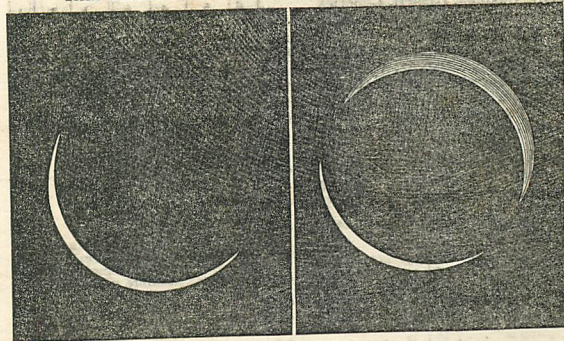
It must be borne in mind that the varying pressure of the atmosphere as well as the direction of strong winds, have a great effect on both the times and the heights of High Water. Thus, in the North Sea, a strong N.N.W. gale and a low barometer, will raise the surface two or three feet higher than usual, and cause the tide to flow half an hour longer all along the coast to London, than the predicted times in the calendar.

An E., a S.E., or a S.W. wind, will produce an opposite effect, so that at times the prediction may be in error half an hour or more.—(See foot note to page 256 of Greenwich Magnetical and Meteorological Observations for 1841.)

(Continued from page 41.)

The Astronomer Royal, G. B. Airy, Esq., made a journey to Turin for the purpose of observing the Eclipse; and in his account of the phenomena, to the Royal Astronomical Society, he remarks that he saw nothing whatever of beads or other irregularity in either of the extinctions of the Sun's limb. But the appearance of the Moon can never be forgotten—it was like a black patch fixed in the sky, surrounded by a ring of faint light, whose breadth he estimated at 1-8th of the Moon's diameter. He then says, "I gazed earnestly at this remark-

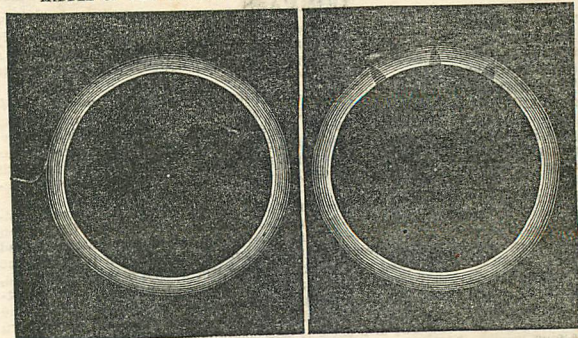
APPEARANCE OF THE SUN A SHORT  
 TIME BEFORE TOTALITY.



able ring, and I could not divest myself of the idea that it was produced by the Sun's light shining past the Moon's body through a portion of our own atmosphere. I wish it to be understood clearly that I do not offer this as an explanation of the ring, (indeed, considering the number of miles by which the Moon's limb overpassed the line drawn from the place of observation to the Sun's limb, I cannot now consider such an explanation feasible.) After a few other remarks on this ring, he proceeds: I took off the dark glasses, and carefully examined the Moon with the telescope. Her disc was distinctly visible as having independent light; and I think that if it had been stronger I might have seen the large

APPEARANCE OF THE MOON AT THE  
 MIDDLE OF THE ECLIPSE.

APPEARANCE OF THE MOON AFTER  
 THE MIDDLE OF THE ECLIPSE.



tracts of different brightness on her disc. I could not, however, see the smallest inequality of light of the nature of broad dark tracts, or dark spot, or bright spot. "While thus looking at the Moon, I saw, to my great surprise, some small red flames at the apparent bottom of the disc (the top as seen with the naked eye). The number of flames, as I have them impressed on my memory, and as I find them drawn on a small pencil sketch made a few minutes after their appearance, was three; their form was nearly that of saw-teeth in the position proper for a circular saw turned round in the same direction as the hands of a watch turn. (See the fifteenth vol. of the *Memoirs of the Royal Astronomical Society*). The preceding are copies of the drawings made by the Astronomer Royal."

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## A TABLE, SHOWING THE TIMES OF SUN-RISE AND SUN-SETTING AT LONDON, AND AT THE CHIEF CITIES AND TOWNS IN GREAT BRITAIN AND IRELAND.

NAMES OF PLACES situated NORTH of London. The numbers opposite to any particular place are to be used for itself and for all Towns or Villages a few miles either N. or S. of it. Example: Required, the Time of Rising and Setting of the Sun at Edinburgh, on January 1st.—

Time of Sun-rise on Jan. 1, in the Almanack, is 8 8  
Opposite to Edinburgh on that day is, add . 0 45  
The Sum is the Time of Sun-rise at Edinburgh . 8 53

The Sun Rises later, than at London, therefore, add the number of minutes to the time of Sun-rising found on that day in the Almanack. And he Sets earlier, therefore, subtract the number of minutes from the time of Setting that day, in the Almanack.

The Sun Rises earlier than at London, therefore, subtract the number of minutes in this table, under the month and day, in the required place, from the time of Sun-rising found on that day in the Almanack; and the result is the time of his Rising at the place required; and the Sun Sets later, therefore, add the number of minutes in this table to the time of Sun-setting on the day found in the Almanack.

The Sun Rises later and Se earlier, as in January, February, and March, therefore, add to time of Sun-rising, and subtract from time of Sun-setting.

	January.		February.		March.		April.		May.		June.		July.		August.		September.		October.		November.		December.	
	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.	1st.	15th.
Thurso, Wick	45	38	28	20	10	3	7	15	25	34	45	49	48	43	33	24	13	5	4	12	23	33	40	46
Dornock, Tain, Portinlick	41	35	26	18	9	3	6	14	23	31	41	45	44	39	30	22	12	4	4	11	21	29	37	42
Peterhead, Banff, Elgin, Cromarty, Inverness	37	32	24	17	8	2	5	12	21	28	37	40	40	35	27	19	11	4	4	9	19	26	34	38
Aberdeen, Inverbervie, Ura, Keil, Lagan	33	29	22	15	7	2	5	11	19	25	33	36	36	32	25	15	10	3	4	8	17	24	30	34
Forfar, Dundee, Perth	30	26	20	13	6	2	5	10	17	22	29	32	32	28	22	25	9	3	3	7	15	22	27	30
Berwick, Edinburgh, Linlithgow, Kinross, Stirling, Glasgow, Dunbar, Leith, Greenock	27	23	17	12	6	2	5	9	16	20	26	28	28	25	20	14	8	3	3	7	14	19	24	27
Alnwick, Jedburgh, Selkirk, Sanquhar, Irvine, Ayr	23	20	15	10	5	2	4	7	13	17	23	24	24	22	17	12	7	3	3	6	11	16	21	23
Newcastle, Shields, Carlisle, Annan, Dumfries, Kirkcudbright, Wigtown, Carrickfergus, Antrim, Londonderry	20	17	13	9	4	2	3	6	11	15	20	21	21	19	15	11	6	2	2	5	10	14	18	20
Scarborough, Whitby, Stockton, Penrith, Whitehaven, N. part of Isle of Man, Belfast, Clogher, Ballyshannon, Sligo	17	14	12	7	4	1	2	5	9	13	17	18	18	16	13	9	5	2	2	4	8	12	15	17
Flamborough, York, Lancaster, S. part of Isle of Man, Newry, Dundalk, Cavan, Castlebar	14	12	10	6	4	1	2	4	8	11	14	15	15	13	11	7	4	2	2	4	7	10	12	14
Grimsey, Hull, Leeds, Wakefield, Liverpool, Beaumaris, Dublin, Athlone, Tuam, Galway, Lincoln, Nottingham, Derby, Stafford, Denbigh, Caernarvon, Wicklow, Athy, Birr, Clare	11	9	8	5	3	1	1	3	6	8	11	12	12	10	8	5	3	1	2	3	5	8	9	11
Yarmouth, Norwich, Ely, Peterborough, Leicester, Coventry, Lichfield, Montgomery, Aberystwith, Enniscorthy, Wexford, Kilkenny, Clonmel, Cashell, Limerick	9	7	6	4	2	1	1	2	4	6	8	9	9	7	6	4	2	1	1	2	4	6	7	9
Adborough, Ipswich, Newmarket, Royston, Bedford, Buckingham, Cheltenham, Hereford, Brecon, Cardigan, Waterford, Dungarvon, Cork, Killarney, Valentia	6	5	4	2	1	1	1	1	3	4	5	6	6	4	4	2	1	0	1	1	3	5	4	6
Ramsgate, Margate, Sheerness, Gravesend, Richmond, Windsor, Wallingford, Eton, Maidenhead, Marlborough, Bath, Bristol, Newport, Cardiff, Pembroke, Kinsale, Bantry	3	3	2	1	1	1	1	1	2	3	3	3	3	3	2	1	1	0	1	1	2	2	2	3

The times of Sun-rising and Sun-setting at those places are those given daily in the ILLUSTRATED LONDON ALMANACK.

NAMES OF PLACES situated SOUTH of London. The numbers opposite to any particular place are to be used for itself and all Villages near it. Example: At what time will the Sun Rise and Set at Brighton on Jan. 15.—

Time of Sun-rise on Jan. 15, is . 8 2  
Opposite Brighton Jan 15, is, subtract . 0 6  
The time of Sun rise at Brighton is . 7 56

The Sun Rises earlier, than at London, therefore, subtract from the time of Sun-rising. He Sets later, therefore, add to time of Sun-setting.

The Sun Rises later than at London, therefore, add to time of Sun-rising. He sets earlier than at London, therefore, subtract from time of Sun-setting.

The Sun Rises earlier than at London, therefore, subtract from the time of Sun-rising, and he Sets later, therefore, add to time of Sun setting.

Dover, Folkestone, Hythe, Tunbridge Wells	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m.	m
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## MAGNETIC DECLINATION OR VARIATION OF THE COMPASS.

If we suspend a magnetised bar to a filament of silk, so that it can move freely in a horizontal direction, it makes a series of oscillations, and finally settles in a determinate position, and whenever moved from this position it always returns to it, or very nearly so.

The place in which the needle remains thus at rest, is called the *magnetic meridian*. At Greenwich, this meridian makes with the astronomical meridian, an angle of about 23° towards the west. This is named *magnetic declination*, or, popularly, "*variation of the compass*;" and it is termed west or east, according as the magnet-bar, that is turned towards the north, (and which is called the north end, or the marked end of the magnet), is east or west of the astronomical meridian.

Everywhere on the surface of the Earth the magnet takes a determinate position, but this position is different in different places. Starting from Greenwich the western variation is found to increase as we proceed towards the west, and attains its greatest value, at present, in the Atlantic Ocean. From this point the western variation diminishes; and, at the east of the United States of America, the magnet points exactly to the north, and the variation is nothing; more westward, it becomes east. Starting from Greenwich, and proceeding towards the east, the west variation is found to diminish, and to be nothing at the eastern part of the Russian empire; and then it becomes east, and more east as we proceed further towards the east.

At the end of the year 1840, a magnet was suspended at the Royal Observatory, at Greenwich, by a skein of silk, freed from all twist, and its position has been examined and recorded every two hours, night and day, from that time to the present, except on Sundays, Good Fridays, and Christmas-days. The observations and the results for the years 1841, 1842, and 1843, have been published. From the 12 observations thus taken daily, the extent of daily motion of the magnet has been deduced, and the average of the 12 taken to deduce the average daily position of the magnet; from the latter, the average monthly position has been deduced, and from these that of each of the years.

The following are the monthly values:—

Month	WESTERN VARIATIONS IN THE YEARS								
	1841			1842			1843		
January	23	11	46	23	11	54	23	11	31
February	17	35		15	23		9	56	
March	19	14		10	35		7	19	
April	11	46		11	0		4	48	
May	17	38		11	39		6	10	
June	16	11		13	59		12	31	
July	15	34		17	14		11	18	
August	19	1		15	10		11	21	
September	24	19		14	11		16	31	
October	12	18		18	4		16	12	
November	17	11		17	22		15	50	
December	11	5		17	22		17	3	

From these numbers it will be seen that the changes of position are frequent and large.

The average value for the year 1841 was 23 16 8  
" " 1842 " 23 14 29  
" " 1843 " 23 11 43

It is found that upon the three years' observations, that at about 7 o'clock in the morning, the marked end of the magnet begins to move to the westward, and, therefore, the variation increases; this increase continues till about 1h. p.m., at which time the variation is at its maximum. The increase between 7h. a.m., and 1h. p.m., is about 7½ minutes of arc.

The marked end of the magnet then moves towards the east, and the variation

diminishes, from 1h. P.M. till about 11h. P.M., the amount of the decrease being about 8½ minutes of arc.

The variation then increases from about 11h. P.M., to about 5h. A.M.; the increase being about three-fourths of a minute of arc.

The variation then diminishes between 5h. A.M., and about 7h. A.M., by about half of a minute.

During these increases and decreases the variation twice reaches its mean value, viz., a little after 9h. A.M., and about 5h. P.M.

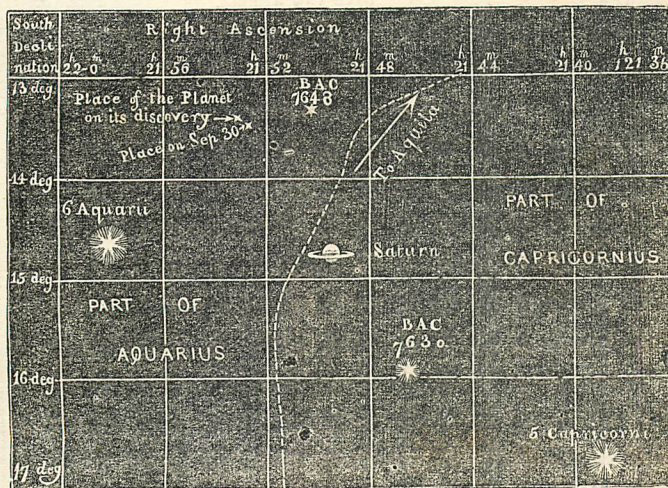
The above remarks are deduced from the yearly average of all the observations taken at the same hours; but when the daily motion is examined in different parts of the year it is found to be different. In summer the daily range of the magnet is nearly 11 minutes, whilst in winter it is only 7½ minutes. In summer there appears to be a double approach to, and a double receding from, the astronomical meridian, whilst in winter there appears to be a single oscillation only.

On some days the change of position is as small as 3 minutes; whilst on other days it may amount to one or two degrees, or even more; and frequently it will amount to half of a degree. At times the magnet will move according to its average motion for many days, or even several months together; at other times it will suddenly depart from its usual motion, and continue thus moving irregularly for an hour, or for several hours; and in a few cases it has been for several days together, under some cause of disturbance. In 1841, on September 25th, the magnet was greatly disturbed, and it was recorded to be in positions such that the variation was 22° 14m., and 24° 30m., and at every position between these; but it is believed by the observer, Mr. Glaisher, from the fact of it moving further than the above positions, on both sides, that the variation of the compass on this day was less than 22° and greater than 25°. [See *Greenwich Magnetical Observations* for 1841, (page 41 to 49), and at page 4 of Abstracts; and also the volumes for 1842 and 1843, for particulars of other days of disturbance.] It is found, too, that on days of disturbance that magnets distributed all over the world move irregularly. (For a description of the Magnetical and Meteorological Observations at Greenwich See the ILLUSTRATED LONDON NEWS for March 16, 1844.)

### LE VERRIER'S NEW PLANET.

A NEW Planet beyond Uranus was discovered at the latter part of 1846, under the most interesting circumstances, which are as follow:—

In the year 1781, on March 13, Uranus was discovered by Sir William Herschel,



SCALE HALF AN INCH TO A DEGREE.

who was examining some small stars near the feet of Gemini, and he observed one of them to have a sensible amount of diameter and less brightness than the others, and it was soon found to be a Planet; it, however, had been seen before, first, by Flamsteed, on December, 23rd, 1690; and, between this time and 1781, it had been observed sixteen times by Flamsteed, Bradley, Mayer, and Lemonnier; these astronomers had classed it as a star of the 6th magnitude. Between 1781 and 1820 it was of course very frequently observed, and it was hoped that at the latter time sufficient data existed to construct accurate tables of its motions; this task was undertaken by M. Bouvard, member of *l'Académie des Sciences*, but he met with unforeseen difficulties. It was found utterly impossible to construct tables which would represent the seventeen ancient observations, and, at the same time, the more numerous modern ones; and it was finally concluded that the ancient observations were erroneous, or that some strange and unknown action disturbed, or had disturbed, the Planet; consequently, M. Bouvard discarded entirely the old observations, and used only those taken between 1781 and 1820, in constructing the tables of Uranus. For some years past, it has been found that the tables thus constructed do not agree any better with modern observations, than they do with the ancient observations; consequently, it was evident that the Planet was under the influence of some unknown cause.

Several hypotheses have been suggested as to the nature of this cause; some persons talked of a resisting medium; others, of a great satellite which might accompany Uranus; some even went so far as to suppose that the vast distance Uranus is from the sun caused the law of gravitation to lose some of its force; others thought that the rapid flight of a Comet had disturbed its regular movements; others thought of the existence of a Planet beyond Uranus, whose disturbing force caused the anomalous motions of the Planet; but no one did otherwise than follow the bent of his inclination, and did not support his assertion by any positive considerations.

Thus was the theory of Uranus surrounded with difficulties, when M. Le Verrier, an eminent French mathematician, undertook to investigate the irregularities in its motions. His first paper appeared on the 10th of November, 1845, and his second on June 1, 1846, published in the "*Comptes Rendus*." In this second paper, after a most elaborate and careful investigation, he proves the utter incompatibility of any of the preceding hypotheses to account for the Planet's motions, except only that of the last one, viz., that of a new Planet. He then successively proves that this Planet cannot be situated either between the Sun and Saturn, or between Saturn and Uranus; but that it must be beyond Uranus. And in this

paper he asks the following questions:—"Is it possible that the inequalities of Uranus can be owing to the action of a Planet, situated in the Ecliptic, at a distance of twice the mean distance of Uranus from the Sun? And, if so, where is it actually situated? What is its mass? What are the elements of the orbit it describes?"

This was the problem he set himself to work upon, by means of solving the inverse problem of the perturbations; for, instead of having to measure the action of a determined Planet, he had to deduce the elements of the orbit of the disturbing Planet, and its place in the heavens, from the recognised inequalities of Uranus. And this problem M. Le Verrier has successfully solved: in his second paper he deduces the place in the heavens that the body must be as 325° of heliocentric longitude. On the 31st of August last he published his third paper. In this he has calculated that the period of the Planet is 217 years, and that it moves in an orbit at the distance of more than 3000 millions of miles from the sun; that its mean longitude, on January 1, 1847, will be 318° 47'; its true longitude, 326° 33'; and that the longitude of its perihelion will be 284° 45'; that it will appear to have a diameter of 3½ seconds of arc, as seen from the Earth; and that it is now about 5° E. of Delta Capricorni.

These remarkable calculations have pointed out a position which has very nearly proved to be the true one.

On Sept. 23rd, Dr. Galle, at Berlin, discovered a star of the eighth magnitude, which has proved to be the Planet; its place at the time is shown in the above Chart; it will be seen to be at the distance of 2½ inches on the Chart from Delta Capricorni (in the Chart Delta has been erroneously engraved as 5); and thus it was five degrees from Delta Capricorni: it was found to have a disc of three seconds as predicted; and its longitude at the time differs less than a degree from the longitude computed from the above elements. Its daily motion, too, is found to agree very closely with the predicted; and, judging from this last circumstance, the Planet's distance, as stated above, must be nearly the truth.

Thus the result of these calculations was the discovery of a new Planet in the place assigned to it by theory, whose mass, distance, position in the heavens, orbit it describes round the sun, were all approximately determined before the Planet had ever been seen, and all agrees with observation so far as can at present be determined. It is found to have a disc, and its diameter cannot be much less than 40,000 miles, and may be more; its motions are very slow; it is at present in the Constellation of Aquarius as indicated by theory, and it will be in the Constellation of Capricornus all the year 1847. It may be readily seen in a telescope of moderate power. Whatever view we take of this noble discovery it is most gratifying—whether at the addition of another Planet to our list; whether at the proving the correctness of the theory of universal Gravitation; or in what view soever, it must be considered as a splendid discovery, and the merit is chiefly due to Theoretical Astronomy.

This discovery is perhaps the greatest triumph of Astronomical Science that has ever been recorded.

During the year 1847, the best times for observing it will be as follows:—In August, about one o'clock in the morning; in September, from nine p.m. till midnight; in October, between seven and ten; in November, between five and eight; and in December, between sunset and six, in the evenings. Saturn will be considerably to the east of the Planet at those times.

### HOLIDAYS KEPT AT PUBLIC OFFICES.

At the Bank, the only Holidays in the Dividend Offices are Good Friday and Christmas Day; in the Transfer Offices, besides the above, May 1 and Nov. 1. East India House and Exchequer, Good Friday and Christmas Day. Custom House and the several Public Dock Companies, Christmas Day and Good Friday, and her Majesty's Birthday, May 24. Excise and Stamp Offices, the Holidays are the same as in the Customs, with the addition of Whit Monday, Whit Tuesday, and May 29.

### OLD BAILEY SESSIONS.—1847.

Monday .. Jan. 4	Monday .. June 14
Monday .. Feb. 1	Monday .. July 5
Monday .. March 1	Monday .. Aug. 10
Monday .. April 5	Monday .. Sept. 20
Monday .. May 10	Monday .. Oct. 25

### QUARTER SESSIONS IN THE SEVERAL COUNTIES OF ENGLAND AND WALES.

It having been found that some inconvenience occasionally arose from the time fixed for holding of the Spring Quarter Sessions interfering with that appointed for holding the Spring Assizes, an Act was passed 4 and 5 Wm. IV., c. xlvii. allowing a discretionary power of the Justices of Peace as to the time of holding the Spring Quarter Sessions, and they are empowered at the preceding Epiphany Sessions to appoint two of their body to alter the day for the Quarter Sessions, if they shall see occasion, so as not to be earlier than the 7th of March, nor later than the 22nd of April; notice of the day so appointed is to be advertised in such papers as the Justices shall direct.

### BRITISH PREMIERS, FROM THE YEAR 1760—1846.

The Right Honourable William Pitt	.. .. .	— to 1760
Earl of Bute	.. .. .	1761 to 1762
George Granville	.. .. .	1762 to 1765
Marquis of Rockingham	.. .. .	1765 to 1766
Duke of Grafton	.. .. .	1766 to 1770
Lord North	.. .. .	1770 to 1782
Earl of Shelburne	.. .. .	1782 to 1784
Right Honourable William Pitt	.. .. .	1784 to 1801
Right Honourable Henry Addington	.. .. .	1801 to 1804
Right Honourable William Pitt	.. .. .	1804 to 1806
Lord Grenville	.. .. .	1806 to 1807
Duke of Portland	.. .. .	1807 to 1809
Right Honourable Spencer Percival	.. .. .	1810 to 1812
Earl of Liverpool	.. .. .	1812 to 1827
Right Honourable George Canning	.. .. .	1827 to 1828
Viscount Goderich	.. .. .	1828 to 1830
Duke of Wellington	.. .. .	1830 to 1834
Earl Grey	.. .. .	1834 to 1835
Duke of Wellington (pro. tem.)	.. .. .	— to 1835
Viscount Melbourne	.. .. .	— to 1835
Sir Robert Peel	.. .. .	1835 to 1836
Viscount Melbourne	.. .. .	1836 to 1841
Sir Robert Peel	.. .. .	1841 to 1846
Lord John Russell	.. .. .	1846 —

# THE ILLUSTRATED LONDON ALMANACK FOR 184.

## STAMPS AND TAXES.

### RECEIPT STAMPS.

For £5 and under £10	..	s. d.	For £200 and under £200	..	s. d.
10	..	0 3	300	..	4 0
20	..	0 6	500	..	5 0
50	..	1 0	1000	..	7 6
100	..	1 6	1000 and upwards	..	10 0
200	..	2 6	In full of all demands	..	10 0

N.B.—Persons receiving the money are compelled to pay the duty.

### BILLS AND NOTES.

£2	and not exceeding	£5	5s.	Not ex. 2 months.	Exceed. 2 months.
Above 5	..	..	..	1 0	1 6
20	..	..	..	1 6	2 0
30	..	..	..	2 0	2 6
50	..	..	..	2 6	3 6
100	..	..	..	3 6	4 6
200	..	..	..	4 6	5 0
300	..	..	..	5 0	6 0
500	..	..	..	6 0	8 6
1000	..	..	..	8 6	12 6
2000	..	..	..	12 6	15 0
Above	..	..	..	15 0	25 0
	..	..	..	25 0	30 0

Promissory Note for the payment of any sum of money by instalments, the same duty as on a Promissory Note payable in less than two months.

### BONDS AND MORTGAGES.

Any sum not exceeding	£50	£1	0	Above £2,000	and not exceeding	£3,000	£7	0
Above £50 and not exceeding 100	..	..	..	3,000	..	..	4,000	8 0
200	..	..	..	4,000	..	..	5,000	9 0
300	..	..	..	5,000	..	..	10,000	12 0
500	..	..	..	10,000	..	..	15,000	15 0
1000	..	..	..	15,000	..	..	20,000	20 0
Bonds of every 1000 words above the first, 25s.				Mortgages, 20s.				

### APPRENTICES' INDENTURES.

Under	£30	£1	£100 and under	£200	£5	£400 and under	£500	£25
£30 and under	50	2	200	..	300	12	500	30
50	..	100	3	300	..	400	20	600

Where no such consideration, if the instrument shall not contain more than 1080 words, £1. And if shall contain more than that quantity, £1 15s.

Where no such consideration, if the instrument shall not contain more than 1080 words, £1. And if shall contain more than that quantity, £1 15s.

### PROBATES OF WILLS AND LETTERS OF ADMINISTRATION.

Above the Value of	And under.	With a Will.	Without a Will.
£20	..	50	0 0
20	..	100	0 10
50	..	100	1 0
100	..	200	2 0
200	..	300	5 0
300	..	450	8 0
450	..	600	11 0
600	..	800	15 0
800	..	1000	22 0
1000	..	1500	30 0
1500	..	2000	40 0
2000	..	3000	50 0
3000	..	4000	60 0
4000	..	5000	80 0
5000	..	6000	100 0

The scale continues to increase up to £1,000,000.

### APPRAISEMENT STAMPS.

Where such appraisement or valuation shall not exceed ..	£50	s. d. 2 6	Above £100 not exceeding £200	£0 10
Above £50 and not exceeding 100	100	5 0	200 .. ..	300 0 15
				500 1 0

### DUTIES ON LEGACIES.

Of the value of £20, or upwards, out of Personal Estate, or charged upon Real Estate, &c.; and upon every share of Residue.—To a child, or parent, or any lineal descendant, or ancestor of the deceased, £1 per cent. To a Brother or Sister or their descendants, £3 per cent. To an Uncle, or Aunt, or their descendants, £5 per cent. To a Great Uncle or Great Aunt, or their descendants, £6 per cent. To any other Relation or Stranger in Blood, £10 per cent.—Legacy to Husband or Wife exempt.

If the deceased died prior to the 5th of April, 1805, the duty only attaches on Personal Estates, and by a lower scale.

### LICENCES.

For Marriage, if special..	..	..	..	£5	0
Do to, if not special	..	..	..	0	10
For Bankers	..	..	..	30	0
For Pawnbrokers, within the limits of the twopenny post	..	..	..	15	0
Elsewhere	..	..	..	7	10
For Appraisers	..	..	..	2	0
For Hawkers and Pedlars, on foot	..	..	..	4	0
Do to, with one horse, ass, or mule	..	..	..	8	0
Selling Beer, to be drunk on the Premises	..	..	..	3	3
Do to, not to be drunk on the Premises	..	..	..	1	1

### DOGS.

For every greyhound	..	..	..	£1	0	0
For every hound, pointer, setting dog, spaniel, terrier, or lurcher, and for every dog, where two or more are kept, of whatever denomination they may be (except greyhounds)	..	..	..	0	14	0
For every other dog, where one only is kept	..	..	..	0	8	0
Compounding a pack of hounds	..	..	..	36	0	0
Farmers with farms under £100 value, and shepherds, are exempt from dogs kept for the care of sheep.						

## WINDOW TAX.

Windows	Duty per Annum.	Windows	Duty per Annum.	Windows	Duty per Annum.	Windows	Duty per Annum.
8	£ s. d.	16	£ s. d.	24	£ s. d.	32	£ s. d.
9	0 16 6	17	3 18 6	25	7 5 9	33	10 13 3
10	1 1 0	18	4 7 0	26	7 14 3	34	11 1 6
11	1 8 0	19	4 15 3	27	8 2 9	35	11 10 0
12	1 16 3	20	5 3 9	28	8 11 0	36	11 18 3
13	2 4 9	21	5 12 3	29	8 19 6	37	12 6 9
14	2 13 3	22	6 0 6	30	9 8 0	38	12 15 3
15	3 1 9	23	6 9 0	31	9 16 3	39	13 3 6
	3 10 0		6 17 6		10 4 9		13 12 0

Farm-houses belonging to Farms under £200 a year are exempt.

\* By cap. 17, 3 and 4 Vict., an additional £10 per cent. is imposed upon all the Assessed Taxes, Customs, and Excise.

## DUTIES ON CARRIAGES.

### WITH FOUR WHEELS.

No.	Per carriage for private use.	No.	Stage coaches & post chaises.
1	£ s. d.	1	£ s. d.
2	6 0 0	2	5 5 0
3	6 10 0	3	10 10 0
4	7 0 0	4	15 15 0
5	7 17 6	5	21 0 0
6	8 4 0	6	26 5 0
7	8 10 0	7	31 10 0
8	8 16 0	8	36 15 0
9	9 1 6	9	42 0 0
			47 5 0

### WITH TWO WHEELS.

	£ s. d.
Carriages with two wheels, each	..
Do to, drawn by two or more horses, or mules	..
For every additional body used on the same carriage	..
For every additional body	..
Carriages let by coachmakers, without horses	..

For every carriage with four wheels, being of less diameter than thirty inches each, where drawn by ponies or mules, above twelve and not exceeding thirteen hands, per annum, £3 5s.; if with less than four wheels, and the ponies not exceeding twelve hands, and not let for hire, exempt. For every carriage with four wheels, drawn by one horse and no more, per annum, £4 10s. Carriages with less than four wheels, drawn by one horse, and constructed and marked as described by Act 6 & 7 Wm. IV., c. 65, and 1 Vict. c. 61, not exceeding £21 in value; also common stage carts, constructed for the carriage of goods, and occasionally used for riding, are exempt.

## HORSE TAX.

### FOR RIDING OR DRAWING CARRIAGES.

No.	Each Horse.	No.	Each Horse.
1	£ s. d.	11	£ s. d.
2	1 8 9	12	3 3 6
3	2 7 3	13	3 3 6
4	2 12 3	14	3 3 9
5	2 15 9	15	3 3 9
6	2 15 9	16	3 3 9
7	2 19 9	17	3 4 0
8	2 19 9	18	3 4 6
9	3 0 9	19	3 5 0
10	3 3 6	20	3 6 0

Horses let to hire without post duty, and race-horses, each .. £1 8 9  
Horses rode by butchers in their trade, each .. .. 1 8 9  
Where two only are kept, the second at .. .. 0 10 6  
Horses for riding, and not exceeding thirteen hands, each .. 1 1 0  
One horse used by a bailiff on a farm .. .. 1 5 0  
Other horses, thirteen hands high, and mules, each .. .. 0 10 6  
A horse used for riding by any one occupying a farm of less annual value than £500 is exempt, provided not more than one is kept; as are also horses employed by market gardeners, in their business.

## PENALTIES UNDER THE STAMP ACT.

For acting as an Appraiser without a license, £50.  
For every Appraisement written upon paper not duly stamped, £50.  
Apprentices' Indentures to state the real amount of premium in proportion to which the stamp duty is charged, on penalty of forfeiting double the amount of premium.  
For Attorneys and Solicitors acting without having been admitted, £100.—For acting without certificate, £50.  
For drawing a Bill or Promissory Note upon unstamped paper, or upon paper insufficiently or wrongly stamped, £50.—For post-dating Bills of Exchange, £100.  
For drawing a Check more than ten miles from the place where made payable, £100.—For receiving the same in payment, £20.—For Bankers paying the same, £100.  
For setting out wrong amount in Conveyance. On the Attorney, £500. On the purchaser, £50.  
For selling Patent Medicines, &c., without a license, £20. Without a stamp, £10.  
For printing a Newspaper without first making declaration as to the ownership, &c., £50 for every day such paper shall be printed or published.—For printing without stamps, on each paper issued, £20.  
For neglecting or delaying to enter Pamphlets at the Stamp Office, or selling without paying duty when demanded, £20.  
For Pawnbrokers taking pledges without a licence, £50. For selling Plate without a licence, £20. For selling plate without being duly stamped, £50.  
For taking possession of the effects of any one deceased, without taking out Letters of Administration, £100.  
For giving an unstamped receipt for money of any amount above £5, £10.  
For giving a receipt on an insufficient stamp, £10.  
For refusing to give a receipt when demanded for money paid exceeding £5, £10.

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

## THE ROYAL FAMILY.

Victoria, Queen, born	May 24 1819	Princess Helena ..	May 25 1846
Prince Albert ..	Aug. 26 1819	Duchess of Kent ..	Aug. 17 1786
Prince of Wales ..	Nov. 9 1841	Adelaide, Queen Dowager	Aug. 13 1792
Princess Royal ..	Nov. 21 1840	King of Hanover ..	June 5 1771
Princess Alice ..	April 25 1843	Duke of Cambridge	Feb. 24 1774
Alfred Ernest Albert	Aug. 6 1844	Duchess of Gloucester	April 25 1776

## HER MAJESTY'S MINISTERS.

### OF THE CABINET.

First Lord of the Treasury (Premier) ..	Lord John Russell
Lord Chancellor ..	Lord Cottenham
Lord President of the Council ..	The Marquis of Lansdowne
Lord Privy Seal ..	The Earl of Minto
Secretaries of State { Home ..	Sir George Grey
Foreign ..	Lord Palmerston
Colonial ..	Lord Grey
Chancellor of the Exchequer ..	The Right Hon. Charles Wood
President of the Board of Control ..	Sir J. C. Hobhouse
President of the Board of Trade ..	The Earl of Clarendon
Admiralty ..	The Earl of Auckland
Paymaster-General ..	The Right Hon. T. B. Macaulay
Chancellor of the Duchy of Lancaster ..	Lord Campbell
Woods and Forests ..	Lord Morpeth
Postmaster-General ..	The Marquis of Clanricarde

### NOT OF THE

Commander-in-Chief ..	The Duke of Wellington
Master-General of the Ordnance ..	The Marquis of Anglesey
Vice President of the Board of Trade ..	The Right Hon. Milner Gibson
Master of the Mint ..	The Right Hon. Richard Lalor Sheil
Secretary at War ..	The Right Hon. Fox Maule
Secretary of the Admiralty ..	H. G. Ward, Esq.
Secretaries of the Treasury ..	J. Parker, Esq., H. Tufnell, Esq.
Secretaries of the Board of Control { Home ..	The Right Hon. G. S. Byng, T. Wyse, Esq.
Foreign ..	Sir William Somerville
Colonial ..	The Right Hon. E. J. Stanley
Under Secretaries { Home ..	B. Hawes, Esq., Mr. Charles Buller
Foreign ..	Lord Ebrington, H. Rich, Esq. The O'Connor Don, W. Gibson Craig Esq.
Lords of the Treasury ..	Admiral Dundas, Capt. the Hon. F. Berkeley, Capt. Lord J. Hay, The Hon. W. Cowper, Admiral Sir C. Adam
Lords of the Admiralty ..	Lord Charles Paget
Ordnance { Secretary ..	The Hon. G. Anson
Clerk ..	Colonel C. R. Fox
Surveyor-General ..	Sir John Jervis
Attorney General ..	Mr. Dundas
Solicitor-General ..	Mr. Charles Buller
Judge-Advocate ..	

### IRELAND.

Lord Lieutenant ..	The Earl of Besborough
Lord Chancellor ..	The Right Hon. M. Brady
Chief Secretary ..	Mr. Labouchere
Attorney-General ..	Mr. Moore
Solicitor-General ..	Mr. Monaghan

### SCOTLAND.

Lord High Constable ..	The Earl of Errol
Lord Privy Seal ..	Viscount Melville
Lord Advocate ..	Mr. A. Rutherford
Solicitor-General ..	Mr. T. Maitland

## THE QUEEN'S HOUSEHOLD.

Lord Great Chamberlain ..	Lord Willoughby d'Eresby
Lord Steward ..	Earl Fortescue
Lord Chamberlain ..	Lord E. Spencer
Vice-Chamberlain ..	Lord E. Howard
Master of the Horse ..	The Duke of Norfolk
Clerk Marshal and Chief Equerry ..	Lord Alfred Paget
Treasurer of the Household ..	Earl Jermyn
Comptroller of the Household ..	Lord Marcus Hill
Master of Buck-hounds ..	Earl Granville
Lord High Almoner ..	Archbishop of York
Sub-Almoner ..	Rev. E. Goodenough, D.D.
Clerk of the Closet ..	Bishop of Norwich
Comptroller of Accounts ..	Sir William Martins
Master of the Household ..	Colonel Bowles
Captain of the Yeomen of the Guard ..	Viscount Falkland
Captain of Gentlemen at Arms ..	Lord Poley
Lords in Waiting ..	Earl of Listowel, Lord Camoys, Lord Waterpark, Earl Ducie, Earl of Morley, Lord Byron, Earl of Morton, Marquis of Ormonde.
Mistress of the Robes ..	The Duchess of Sutherland
Ladies of the Bedchamber ..	Countess of Mount Edgumbe, Marchioness of Douro, Viscountess Caning, Lady Portman, Countess of Charlemont, Countess of Gainsboro', Viscountess Jocelyn, Countess of Desart.
Physicians ..	Charles Locock, Esq., M.D., Sir James Clark, Bart., and W. F. Chambers, Esq., M.D.
Surgeons ..	Sir B. C. Brodie, Bart., and Robert Keate, Esq.

## LAW COURTS.

CHANCERY.—Lord High Chancellor, Lord Cottenham. Master of the Rolls, Lord Langdale. Vice Chancellor, Sir L. Shadwell. First Vice Chancellor, Sir James L. K. Bruce, Second ditto, Sir James Wigram.

QUEEN'S BENCH.—Lord Chief Justice, Lord Denman. Judges, Sir John Patteson, Sir John T. Coleridge, Sir Wm. Wightman, Sir Wm. Erle.

COMMON PLEAS.—Lord Chief Justice, Sir Thomas Wilde. Judges, Sir Thomas Coltman, Sir Wm. Hen. Maule, Sir W. Creswell, Sir Vaughan Williams.

EXCHEQUER.—Lord Chief Baron, Sir Frederick Pollock. Barons, Sir James Parke, Sir Edw. H. Alderson, Sir Robert M. Rolfe, Sir Thomas J. Platt.

## CITY OFFICERS.

### LORD MAYOR.

Elected September 29th—Sworn in November 8th.  
The Right Honourable Sir George Carroll, Kt., Cawdwick, 1840.

### SHERIFFS.

Elected 24th June—Sworn in 28th September.

Alderman Challis. | R. W. Kennard, Esq.

### UNDER SHERIFFS.

A. J. Baylis, Esq. | T. Tilleard, Esq.

### ALDERMEN.

THE FOLLOWING HAVE NOT PASSED THE CHAIR.

Wood, Thomas, Esq., Cordwainer; 3, Corbet-court, Gracechurch St.	When-chosen Aldermen.
Hooper, John K., Esq., Queenhithe; 20, Queenhithe	.. 1835
Duke, Sir James, Kt., M.P., Farringdon Without; Botolph-lane	.. 1840
Farncomb, Thomas, Esq., Bassishaw; Griffin's Wharf, Southwark	.. 1840
Musgrove, John, Esq., Broad-street; 18, Old Broad-street	.. 1842
Hunter, William, Esq., Coleman-street; 10, Finsbury Circus	.. 1843
Challis, Thomas, Esq., Cripplegate; 32, Wilson-street, Finsbury	.. 1843
Hughes, Hughes William, Esq., Broad-street; 17, Great Distaff-lane	.. 1843
Sidney, Thomas, Esq., Billingsgate; 8, Ludgate-hill	.. 1844
Moon, F. G. Esq., Portsoken; 20, Threadneedle-street	.. 1844

### THE FOLLOWING HAVE PASSED THE CHAIR.

Hunter, Sir C. S. Bart., Bridge Without; 23, Euston-square	.. 1804
Lucas, M. P., Esq., Tower; 21, Water-lane	.. 1821
Thompson, W. Esq., M.P., Cheap; Upper Thames-street	.. 1821
Key, Sir John, Bart., Langbourn; 9, King's Arms-yard	.. 1823
Laurie, Sir Peter, Knt., Aldersgate; 7, Park-square, Regent's-park	.. 1826
Farebrother, C., Esq., Lime-street; 6, Lancaster-place, Strand	.. 1826
Copeland, W. Esq., M.P., Bishopsgate; 37, Lincoln's Inn-fields	.. 1829
Kelly, T. Esq., Farringdon Within; 17, Paternoster-row	.. 1830
Wilson, Samuel, Esq., Castle Baynard; 24, St. Paul's Church-yard	.. 1831
Marshall, Sir C. Knt., Bridge Within; 43, Russell-square	.. 1832
Pirie, Sir John, Bart., Cornhill, 71, Cornhill	.. 1834
Humphery, J. Esq., M.P., Aldgate; Hays's Wharf, Southwark	.. 1835
Magnay, Sir William, Bart., Vintry; College-hill	.. 1836
Gibbs, Michael, Esq., Walbrook; 33, Walbrook	.. 1838
Johnson, John, Esq., Dowgate	.. 1839

## COURT OF BANKRUPTCY.

Chief Judge, Vice Chancellor Bruce  
Chief Registrars, Mr. Sergeant Edward Lawes and Mr. Oyrler  
Deputy Registrars, Messrs. Campbell, Winslow, Pollock, Whitehead, Miller and Abrahall  
Registrar of Meetings, Jeremiah Hodgson, Esq., Resident  
Enrolment Office, Mr. Church  
Commissioners, Mr. Sergeant Goulburn, J. Evans, J. S. M. Fonblanque, R. G. C. Fane, E. Holroyd, and J. H. Shepherd, Esqrs.  
Birmingham, John Bagnay, Q.C., Esq., and Robert Daniell, Esq.  
Liverpool, Walter Skirrow, Esq., and — Perry, Esq.  
Manchester, Ebenezer Ludlow, Esq., and Sergeant and Wm. Thos. Jemmett, Esq.  
Leeds, Martin John West, Esq., and Montague Bere, Esq.  
Bristol, H. J. Stephen, Esq., Sergeant, and Richard Stevenson, Esq.  
Exeter, Edward Goulburn, Esq., Sergeant  
Newcastle, N. Ellison, Esq.

## INSOLVENT DEBTORS' COURT.

Chief Commissioner, H. R. Reynolds, Esq.  
Commissioners, J. G. Harris, William J. Law, and C. Phillips, Esq.  
Provisional Assignee, S. Sturgis, Esq.  
Chief Clerk, J. Massey, Esq.  
Tax Master, H. C. Richards, Esq.  
Clerk of the Rules, C. V. White, Esq.  
County Registrar—H. Simpson, Esq.

## GOVERNMENT OFFICES AND OFFICERS.

TREASURY, WHITEHALL.  
LORDS COMMISSIONERS.  
Lord John Russell, Lord Ebrington, H. Rich, Esq., The O'Connor Don, W. Gibson Craig, Esq.  
Secretaries, J. Parker, Esq., H. Tufnell, Esq.  
Assistant Secretary, C. E. Trevelyan, Esq.  
Principal Clerk, S. R. Leake, Esq.  
Solicitor, G. Maule, Esq.  
Paymaster, W. Sargent, Esq.  
Cashiers, W. Halden, E. Kitchen, Esqs.  
Accountant, J. Miller, Esq.  
EXCHEQUER, WHITEHALL YARD.  
Chancellor, the Right Hon. Charles Wood.  
Comptroller, Lord Monteagle.  
Assistant, A. Eden, Esq.  
Chief Clerk, F. T. Ottey, Esq.  
Accountant, G. S. Frederick, Esq.  
HOME OFFICE, WHITEHALL.  
Secretary of State, Sir George Grey.  
Under Secretaries, S. M. Phillips, Esq., Sir Wm. Somerville, Bart.  
Chief Clerk, T. H. Plasket, Esq.  
Private Secretary, H. Brand, Esq.  
FOREIGN OFFICE, DOWNING-STREET.  
Secretary of State, Lord Palmerston.  
Under Secretaries, the Right Hon. E. J. Stanley, H. U. Addington, Esq.  
Chief Clerk, G. L. Conyngham, Esq.  
Private Secretary, the Hon. Spencer Ponsonby.  
COLONIAL OFFICE, DOWNING-STREET.  
Secretary of State, Earl Grey.  
Under Secretaries, B. Hawes, Esq., Jas. Stephen, Esq., F. Rogers, Esq.  
Chief Clerk, Peter Smith, Esq.  
Private Secretary, the Hon. Capt. Grey.  
IRISH OFFICE, 18, GREAT QUEEN-STREET, WESTMINSTER.  
Chief Secretary, Mr. Labouchere.  
Chief Clerk, W. J. McCulloch, Esq.  
Assistant, Hon. S. D. Montague.  
Private Secretary, E. Batty, Esq.  
Counsel, H. M. O'Hanlan, Esq.  
BOARD OF TRADE, TREASURY, WHITEHALL.  
President, the Earl of Clarendon.  
Vice President, Mr. Milner Gibson.  
The Archbishop of Canterbury, the Cabinet Ministers, and Right Hon. Charles Arbuthnot.  
Secretaries, J. Macgregor, Esq., J. G. S. Lefevre, Esq.  
Assistant Secretaries, F. Lack, Esq., H. Hobart, Esq.  
Private Secretary, E. Bowring, Esq.  
BOARD OF CONTROL, CANNON-ROW, WESTMINSTER.  
President, Sir John Cam Hobhouse, and the Cabinet Ministers.  
Secretaries, the Right Hon. G. S. Byng, T. Wyse, Esq.  
Private Secretary, T. B. Hobhouse, Esq.  
Solicitor, R. Groom, Esq.  
ADMIRALTY, WHITEHALL.  
Lords Commissioners, The Earl of Auckland, Admiral Sir C. Adam, Admiral Dundas, Captain the Hon. F. Berkeley, Captain Lord John Hay, the Hon. Wm. Cowper.  
Secretaries, H. G. Ward, Esq., Capt. W. A. B. Hamilton, R.N.  
Private Secretary, Capt. H. Eden  
Chief Clerk, H. F. Amedroz, Esq.  
Hydrographer, Capt. F. Beaufort.  
Assistant, M. Walker, Esq.  
Civil Architect, Capt. Brandreth.

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

**CIVIL DEPARTMENT, SOMERSET HOUSE.**  
Surveyor, Sir W. Symonds, F.R.S.  
Assistant, John Edey, Esq., F.R.S.  
Inspector-General, Sir W. Burnett.  
Director-General of Works, Capt. Brand-  
reth, R.E.  
Storekeeper, Hon. R. Dundas.  
Chief Clerks, T. Collings, W. Leyburn,  
B. Fosset, Wm. Scamp, Esqs.  
Accountant, J. T. Briggs, Esq.  
Deputy Accountant, O'Bryan Woolsey,  
Esq.

**ROYAL OBSERVATORY,**  
GREENWICH.  
Astronomer Royal, G. B. Airy, Esq. M.A.  
Assistants, Rev. R. Main, M.A., John  
Henry, Esq., William Ellis, Esq.  
**MAGNETICAL AND METEOROLOGICAL**  
**DEPARTMENT.**

Superintendent, James Glashier, Esq.  
Assistant, Mr. Hugh Brown.  
**ROYAL HOSPITAL FOR SEAMEN,**  
GREENWICH.

Governor, Admiral the Hon. Sir Robt.  
Stopford, G.C.M.G.  
Lieutenant-Governor, Rear Admiral Sir  
James Alexander Gordon.  
Captains, J. Simpson, J. Bowker, Sir G.  
Mowbray, A. B. Branch.  
Commanders, C. Robinson, W. C. C.  
Dalzell, J. Corbyn, E. W. Garrett.  
Lieutenants, F. Bedford, W. Rivers, M.  
Fitton, J. W. Rouse, D. O'Brien Ca-  
sey, B. J. Loveless, J. Dornford, C.  
McKenzie.

Chaplains, Rev. J. K. Goldney, Rev. E.  
Kitson  
Medical Inspector of Hospitals, John  
Liddell, M.D.  
Deputy Medical Inspector of Hospitals,  
Alex. Nisbet, M.D.  
Surgeon, James M'Ternan.

**CIVIL DEPARTMENT.**  
Commissioners, Hon. W. B. Baring,  
(Paymaster of the Navy), the Earl of  
Lincoln, Sir C. E. Douglas, M.P.,  
Capt. Sir H. Hart, R.N., Sir W. O.  
Pell, R.N., George Tierney, Esq.  
Secretary, J. A. Lethbridge, Esq.  
**ROYAL HOSPITAL SCHOOLS,**  
GREENWICH.

Superintendent, Lieut. John W. Rouse.  
Lieutenant, Bassett J. Loveless.  
Chaplain, Rev. Geo. Fisher, M.A., F.R.S.  
Master of the Nautical School, Edw.  
Riddle, F.R.A.S.

**JUDGE ADVOCATE-GENERAL'S**  
**OFFICE,**  
35, GREAT GEORGE-ST., WESTMINSTER.  
Judge Advocate, Mr. Chas. Buller.  
Deputy, F. N. Rogers, Esq., Q.C.

**WAR OFFICE,**  
WHITEHALL.  
Secretary at War, Rt. Hon. Fox Maule.  
Deputy, L. Sullivan, Esq.  
Examiner, E. Marshall, Esq.  
First Clerk, J. Borrow, Esq.  
Senior Clerks, H. Milton, R. Kirby, J.  
Sandham, J. Crooms, F. Kimpton, G.  
White, W. Anderson, J. Hanby, Esqs.  
Private Secretary, — Carmichael Esq.  
**PAYMASTER-GENERAL'S OFFICE,**  
WHITEHALL.

Paymaster-General, the Right Hon. T.  
B. Macaulay.  
Accountant, W. G. Anderson, Esq.  
Paymaster, T. Powis, Esq.  
Principal Clerks, P. Graves, T. Morris,  
H. Burslem, F. Philpot, J. Sturton,  
J. Perrier, A. H. Harrison, A. Skot-  
towe, Esqs.

**COMMANDER-IN-CHIEF'S OFFICE,**  
HORSE GUARDS.  
Commander-in-Chief, Duke of Wellin-  
ton.

Private Secretary, A. Greville, Esq.  
Military Secretary, Lieut.-General Lord  
F. Somerset.  
Aides-de-Camp, Col. Hon. G. Anson,  
Lieut.-Col. Marquis of Douro, Cornet  
Earl of March, Cornet Marquis of  
Worcester.

Assistants to Military Secretary, F. H.  
Lindsay, Esq., F. Fergusson, Esq.  
**ADJUTANT-GENERAL'S OFFICE,**  
HORSE GUARDS.

Adjutant-General, Sir J. Macdonald.  
Deputy, Major-Gen. G. Brown.  
Assistant, Colonel-Cochrane.  
Deputy, Major Roche Mead.  
First Clerk, R. Cannon, Esq.

**QUARTER-MASTER GENERAL'S**  
**OFFICE,**  
HORSE GUARDS.  
Quarter-Master General, General Sir J.  
W. Gordon.

Assistant, Colonel J. Freeth.  
Deputy, Major Enoch.  
Confidential Clerk, J. O'Neil, Esq.  
First Clerk, T. Marsh, Esq.  
**BOARD OF ORDNANCE,**  
86, PALL MALL.

Master-General, Marquis of Anglesey.  
Surveyor-General, Col. C. R. Fox.  
Clerk, the Hon. G. Anson.  
Storekeeper, Sir Thomas Hastings.  
Secretary to the Master-General, Lord  
C. Paget.

Secretary to the Board, R. Byam, Esq.  
Aide-de-Camp, Capt. H. W. Paget.  
**WOODS AND FORESTS,**  
2, WHITEHALL-PLACE.  
Commissioners, Viscount Morpeth, Alex.  
Milne, Esq., Hon. C. A. Gore,  
RANGERS, KEEPERS, &c.

Windsor Great Park, Prince Albert.  
Bushy Park, Queen Dowager.  
Hyde Park, H.R.H. Duke of Cambridge.  
St. James's Park, Duke of Cambridge.  
Richmond Park, Duke of Cambridge.  
Greenwich Park, the Earl of Aberdeen.  
Hampton Court, Lady Bloomfield.  
New Forest, Duke of Cambridge.  
Whittlebury Forest, Duke of Grafton.  
Waltham Forest, Earl of Mornington.  
Wychwood Forest, Lord Churchill.  
Dean Forest, Earl of Lincoln.

**QUEEN'S MINT,**  
LITTLE TOWER-HILL.  
Master Worker, R. L. Sheil, Esq.  
Deputy, J. M. Morrison, Esq.  
Comptroller, W. H. Barton, Esq.  
Chief Engraver, Wm. Wyon, Esq.  
Assistant, Leonard Wyon, Esq.  
Chief Medallist, B. Pistrucci, Esq.  
Assayer, H. Bingley, Esq.  
Solicitor, John Blunt, Esq.

**STATE PAPER OFFICE,**  
12, DUKE-STREET, WESTMINSTER.  
Keeper, Right Hon. H. Hobhouse.  
Deputy, C. Lechmere, Esq.  
Chief Clerk, R. Lemon, Esq.  
Junior Clerk, T. Temple, Esq.

**PRIVY SEAL,**  
28, ABINGDON-STREET, WESTMINSTER.  
Lord Privy Seal, Earl of Minto.  
Chief Clerk, J. G. Donne, Esq.  
(By Patent) R. Eden, Esq.

Keeper of Records, R. Eden, Esq.  
**SIGNET OFFICE,**  
28, ABINGDON-STREET.  
Keepers of the Signet, the Secretaries  
of State.  
Chief Clerks, Right Hon. Sir B. Taylor,  
Rev. W. H. E. Bentinck, J. Gage, Esq.  
Deputies, T. H. Plasket, B. Taylor, Esqs.  
Record Keepers, E. D. Jones, Esq., H.  
W. Sanders, Esq.

**CUSTOM HOUSE,**  
Chairman, Sir Thomas Fremantle.  
Deputy, the Right Hon. G. R. Dawson.  
Commissioners, H. Richmond, Esq., S.  
G. Lushington, Esq., — Dickens, Esq.,  
— Goulburn, Esq., C. C. Smith, Esq.,  
Hon. E. Spring Rice.  
Secretary, C. Scovell, Esq.  
Assistant, W. Maclean, Esq.  
Receiver-General, Sir F. Doyle.  
Comptroller-General, W. Dickinson, Esq.  
Solicitor, J. G. Walford, Esq.

**STAMP AND TAX OFFICE,**  
SOMERSET HOUSE.  
Chairman, H. L. Wickham, Esq.  
Deputy, J. Thornton, Esq.  
Commissioners, C. P. Rushworth, Esq.,  
H. S. Montague, Esq., Alfred Mont-  
gomery, Esq.

Secretary, C. Pressly, Esq.  
Assistant Secretary, T. Keogh, Esq.  
Receiver-General, W. Everett, Esq.  
Comptroller, T. Lightfoot, Esq.  
Comptroller of Legacy Duties, C. Tre-  
vor, Esq.  
Solicitor, Joseph Timm, Esq.  
Assistant Solicitor, Hugh Tilsley, Esq.

**POOR LAW COMMISSION,**  
1 & 2, SOMERSET PLACE.  
Commissioners, G. Nichols, Esq., G. C.  
Lewis, Esq., Sir E. W. Head, Bart.,  
E. J. B. Twisleton, Esq.  
Assistant Commissioners, Edward Gul-  
son, W. H. T. Hawley, R. Hall, R.  
Weale, Esq., Sir J. Walsham, Bart., A.  
Austin, Esq., Col. Thomas F. Wade,  
G. G. W. Pigott, Esq., J. T. Graves, Esq.  
Secretary, E. Chadwick, Esq.  
Assistant Secretary, W. G. Lumley, Esq.

**THE FOLLOWING ARE SERVING IN**  
**IRELAND.**  
Alfred Power, Esq., E. Senior, Esq., W.  
J. Hancock, Esq., C. G. Otway, Esq.,  
J. Burke, Esq., John Ball, Esq.  
Chief Clerk, A. Moore, Esq.

**TITHE COMMISSION,**  
9, SOMERSET PLACE.  
W. Blamire, Esq., T. W. Buller, Esq.,  
Rev. Richard Jones, M.A.  
**COLONIAL LAND AND EMIGRA-  
TION COMMISSIONERS,**  
9, PARK-STREET, WESTMINSTER.  
T. F. Elliot, Esq., Charles Alex. Wood,  
Esq. Fredk. Rogers, Esq.  
Secretary, S. Walcott, Esq.

**ADMIRALTY COURT,**  
2, PAUL'S BAKEHOUSE-COURT, DOCTORS'-  
COMMONS.  
Judge, Right Hon. S. Lushington,  
D.C.L.  
Registrar, H. B. Swabey, Esq.  
Queen's Advocate, Sir J. Dodson, LL.D  
Admiralty Advocate, J. Phillimore,  
D.C.L.  
Judge Advocate, H. J. Shepherd Esq.  
Queen's Proctor, Francis Hart Dyke,  
Esq.  
Admiralty Proctor, W. Townshend, Esq.  
Marshal, Hon. Hugh Lindsay.  
Solicitor Chas. Jones, Esq.

**METROPOLIS ROADS,**  
22, WHITEHALL-PLACE.  
Secretary, J. L. Panter, Esq.  
Surveyor-General, Sir Jas. McAdam.  
Accountant, R. Robertson, Esq.  
Assistant, V. C. Wright, Esq.  
Inspector, H. Brown, Esq.  
Solicitor, J. W. Lyon, Esq.

## GENERAL POSTAL REGULATIONS.

### HEADS OF DEPARTMENTS.

Postmaster-General, Lord Clanricarde; Secretary, Lieut.-Col. W. L. Maberly;  
Assistant-Secretary, J. Campbell, Esq.; Chief Clerk to the Secretary, C. Johnson,  
Esq.; Solicitor, Mark B. Peacock, Esq.; Surveyor and Superintendent of Mail  
Conveyance and Guards, G. Stow, Esq.; Accountant General, C. T. Court,  
Esq.; Receiver-General, T. Young, Esq. Inspector of Ship Letters, G. Hudle-  
stone, Esq.; Inspector of the Dead Letter Office, K. Newton, Esq.; President  
of the Money Order Office, W. Barth, Esq.; Superintendent-President of the Inland  
and Foreign Department, W. Bokenham, Esq.; Inspectors of the Carriers  
(general post), F. Kelly, Esq.; Superintendent-President of the London District  
Post, R. Smith, Esq.

### RATES OF POSTAGE.

All letters from one part of Great Britain to another (including the Local  
Penny Posts and the London Twopenny Post) are charged, if prepaid, and not  
Exceeding half an ounce . . . . . 1d.  
Exceeding half an ounce, and not exceeding 1 ounce . . . 2d.  
and so on at the rate of 2d. for every additional ounce or fraction of an ounce.  
Unpaid and unstamped letters are charged double postage on delivery.  
Letters or packets exceeding 16 ounces in weight, not forwarded—except,  
Parliamentary petitions and addresses to her Majesty,  
Parliamentary proceedings,  
Letters or packets addressed to, or received from, places beyond sea, or  
To and from public departments and public officers.

### HOURS OF POSTING.

#### FOR THE EVENING MAILS.

The receiving houses close at 5 30 P.M. Letters are received for the evening's  
dispatch at the Branch Post-offices at Charing-cross, Old Cavendish-street, and  
108 Blackman-street, Southwark, until 6 P.M., and, with a fee of one penny,  
which must be paid by affixing a stamp to the letter, until 6 45 P.M. At the  
Branch Post-office in Lombard-street, the box remains open without additional  
fee until 6 P.M., and until 7 P.M., by affixing a penny stamp. At the General  
Post-office in St. Martin's-le-grand until 6, free, and 7 by payment of the extra  
charge as at Lombard-street. From 7 to half-past 7 P.M., letters may be posted  
there upon payment of a fee of sixpence each, which must, as well as the postage,  
be prepaid. Letters intended to pass by outward mails to foreign parts must be  
posted at the above hours.

N.B. Newspapers for the evening mails must be put into the receiving houses  
before 5 P.M., the Branch offices before 5 30, or General Post-office before 6 P.M.  
From 6 P.M. to 7 30, on payment of one halfpenny late fee.

**MORNING MAILS** are forwarded to most of the principal towns in England and  
Wales, and to all parts of Ireland and Scotland, for which the letter boxes at the  
Receiving Houses will be open till 7 A.M. for newspapers, and 8 A.M. for letters;  
and those at the Branch Offices, Charing-cross, Old Cavendish-street, and the  
Borough, for newspapers until half-past 7 A.M., and for letters until 8 A.M. At  
the General Post Office and the Branch Office in Lombard-street, the boxes will  
close for newspapers at a quarter before 8 A.M., and for letters at half-past 8 A.M.  
Foreign letters are subject to various rates of postage, the amounts of which can  
be ascertained at any of the Branch Offices or Receiving Houses.

\* \* It is requested that all letters be fully and legibly addressed, and posted as  
early as convenient. Also, that whatever kind of stamp is used, that it invariably  
stand on the right hand corner of the letter above the address.

British and Colonial papers between British Colonies, without passing through  
the United Kingdom to be free; except that 1d. may be allowed as a gratuity to  
the master of the vessel conveying them.

Newspapers, British, Foreign, or Colonial, passing between British or Colonial  
and Foreign Ports, and through the British post, to pay 2d.; if not through the  
British post, 1d.

Such papers passing between places in British North America or British West  
Indian Colonies, to pay a uniform inland rate of 3d.  
Each supplement to be charged as a separate newspaper, whether inclosed  
separately or not.

The Postage rate to Hanover is altered to a uniform British rate of 6d.; pre-  
payment of the whole postage of British and Foreign rates optional. News-  
papers 1d.

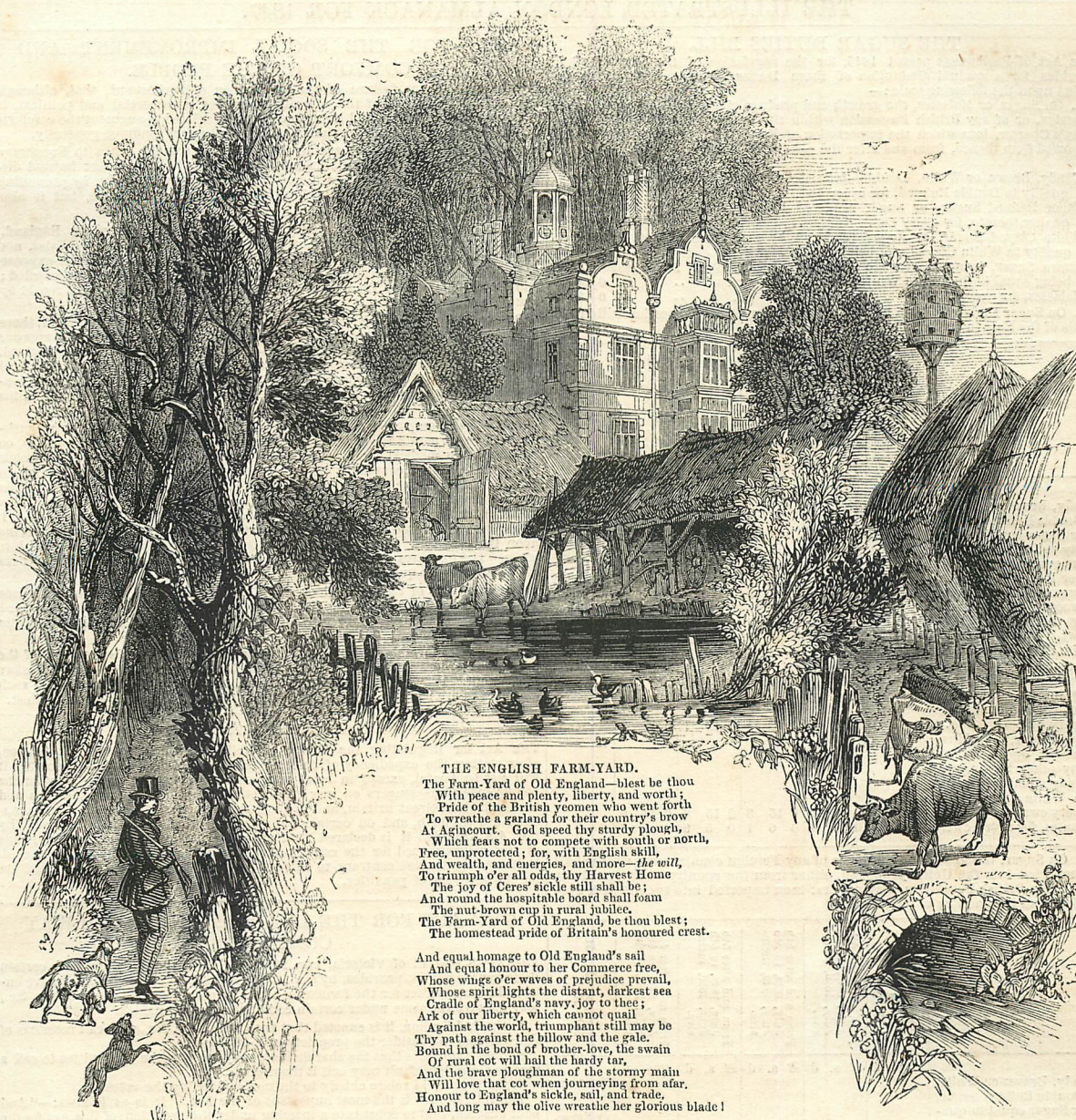
**MONEY ORDERS** for sums not exceeding £2 are charged threepence; not exceed-  
ing £5, sixpence; above £5 no money order can be obtained. They are granted and  
paid between the hours of ten and four daily. Persons residing in London should  
instruct their correspondents who may obtain money orders, to make them pay-  
able at the most convenient office, as money orders granted, bearing "Post Office  
London" can be paid at the principal office only, in St. Martin's-le-Grand.

**OFFICE OF METROPOLITAN**  
**BUILDINGS,**  
6 ADELPHI TERRACE.  
Registrar, A. Symonds, Esq.  
Official Referees, Sir Robt. Smirke, Mr.  
Jas. Pennethorn, Mr. Thos. Cubitt.  
**GENERAL REGISTER OFFICE,**  
7, AND 8, SOMERSET PLACE, SOMERSET  
HOUSE.

Reg.-General, G. Graham, Esq.  
Chief Clerk, Thomas Mann, Esq.  
First Clerk of Records, E. Edwards, Esq.  
**EXCHISE OFFICE,**  
OLD BROAD STREET.

Chairman, J. Wood, Esq.  
Deputy, Hart Davis, Esq.  
**COMMISSIONERS.**  
T. Harrison, Esq., H. F. Stephenson,  
Esq., Hon. W. H. Percy, C. J. Herries,  
Esq., and Charles Ross, Esq.  
Secretary, J. C. Freeling, Esq.  
Assistant, G. Bolland, Esq.  
Receiver-General, W. T. Thornton, Esq.  
Comptroller and Auditor, Vaughan  
Davies, Esq.  
Solicitor, C. M. Carr, Esq.  
Assistant Solicitor, J. Bateman, Esq.,  
LL.D.

**RAILWAY BOARD,**  
20, GREAT GEORGE-ST., WESTMINSTER.  
Chief Commissioner, Edward Strutt,  
Esq., M.P.  
Commissioners, Earl Granville, Sir Ed-  
ward Ryan, Capt. H. E. Brandeth, R.E.



#### THE ENGLISH FARM-YARD.

The Farm-Yard of Old England—blest be thou  
With peace and plenty, liberty, and worth;  
Pride of the British yeomen who went forth  
To wreath a garland for their country's brow  
At Agincourt. God speed thy sturdy plough,  
Which fears not to compete with south or north,  
Free, unprotected; for, with English skill,  
And wealth, and energies, and more—the will,  
To triumph o'er all odds, thy Harvest Home  
The joy of Ceres' sickle still shall be;  
And round the hospitable board shall foam  
The nut-brown cup in rural jubilee.  
The Farm-Yard of Old England, be thou blest;  
The homestead pride of Britain's honoured crest.

And equal homage to Old England's sail  
And equal honour to her Commerce free,  
Whose wings o'er waves of prejudice prevail,  
Whose spirit lights the distant, darkest sea  
Cradle of England's navy, joy to thee;  
Ark of our liberty, which cannot quail  
Against the world, triumphant still may be  
Thy path against the billow and the gale.  
Bound in the bond of brother-love, the swain  
Of rural cot will hail the hardy tar,  
And the brave ploughman of the stormy main  
Will love that cot when journeying from afar.  
Honour to England's sickle, sail, and trade,  
And long may the olive wreath her glorious blade!

#### SIR R. PEEL'S NEW CORN BILL OF 1846.

The important measure brought in by Sir Robert Peel last Session for the gradual repeal of the Corn-laws is a very brief one. It commences by stating, that after the passing of the Act, till the 1st of Feb. 1849, the duties set forth in the schedule shall be payable upon all corn, &c., imported. It then recites, that on and after the 1st Feb. 1849, the following duties only shall be levied:—

Upon all Wheat, Barley, Bear or Bigg, Oats, Rye, Pease, and Beans, for every quarter .. .. . s. d.  
.. .. . 1 0

And so in proportion, for a less quantity.

Upon all Wheat Meal and Flour, Barley Meal, Oatmeal, Rye Meal and Flour, Pea Meal, and Bean Meal, for every cwt. 0 4½

And so in proportion for a less quantity.

The average prices are to be still made up according to the regulations made by 5 and 6 Victoria, cap. 14.

The following is the schedule above referred to:—

If imported from any foreign country.

WHEAT:—Whenever the average price of Wheat made up and published in the manner required by law shall be for every quarter under 48s., the duty shall be	s. d.
48s. and under 49s. .. .. .	10 0
49s. and under 50s. .. .. .	9 0
50s. and under 51s. .. .. .	8 0
51s. and under 52s. .. .. .	7 0
52s. and under 53s. .. .. .	6 0
53s. and upwards .. .. .	5 0
53s. and upwards .. .. .	4 0

BARLEY, BEAR, OR BIGG:—Whenever the average price of Barley, made up and published in the manner required by law, shall be for every quarter under 26s., the duty shall be for every quarter .. .. . s. d.  
.. .. . 5 0

26s. and under 27s. .. .. .	4 6
27s. and under 28s. .. .. .	4 0
28s. and under 29s. .. .. .	3 6

29s. and under 30s. .. .. .	3 0
30s. and under 31s. .. .. .	2 6
31s. and upwards .. .. .	2 0

OATS:—Whenever the average price of Oats, made up and published in the manner required by law, shall be for every quarter under 18s. the duty shall be for every quarter .. .. . s. d.  
.. .. . 4 0

18s. and under 19s. .. .. .	3 6
19s. and under 20s. .. .. .	3 0
20s. and under 21s. .. .. .	2 6
21s. and under 22s. .. .. .	2 0
22s. and upwards .. .. .	1 6

RYE, PEASE, AND BEANS:—For every quarter, a duty equal in amount to the duty payable on a quarter of Barley.

WHEAT MEAL AND FLOUR:—For every barrel, being one hundred and ninety-six pounds, a duty equal in amount to the duty payable on thirty-eight gallons and a half of Wheat.

BARLEY MEAL:—For every quantity of two hundred and seventeen and a half pounds, a duty equal in amount to the duty payable on a quarter of Barley.

OATMEAL AND GROATS:—For every quantity of one hundred and eighty-one pounds and a half, a duty equal in amount to the duty payable on a quarter of oats.

RYE MEAL AND FLOUR:—For every barrel, being one hundred and ninety-six pounds, a duty equal in amount to the duty payable upon forty gallons of Rye.

PEA MEAL AND BEAN MEAL:—For every quantity of two hundred and seventy-two pounds, a duty equal in amount to the duty payable on a quarter of Pease or Beans.

If the produce of and imported from any British Possession out of Europe:

Wheat, Barley, Bear, or Bigg, Oats, Rye, Pease, and Beans, the duty shall be for every quarter .. .. .	s. d.
.. .. .	1 0
Wheat Meal, Barley Meal, Oatmeal, Rye Meal, Pea Meal, and Bean Meal, the duty shall be for every cwt. .. .. .	s. d.
.. .. .	0 4½

## THE SUGAR DUTIES BILL.

THE Act of Parliament passed 1846, for the regulation of the Sugar Duties, provides for a gradual diminution of these Duties. The amount is to be levied upon the following scale:—

1. On Sugar, or Molasses, the growth and produce of any British Possession in America, or of any British Possession within the limits of the East India Company's Charter, into which the importation of Foreign Sugar is prohibited, and imported from thence, from and after the passing of this Act:

	£	s.	d.
Candy, Brown or White, Double Refined Sugar, or Sugar equal in quality to Double Refined, for every cwt. . . . .	1	1	0
Other Refined Sugar, or Sugar rendered by any process equal in quality thereto, for every cwt. . . . .	0	18	8
White Clayed Sugar, or Sugar rendered by any process equal in quality to White Clayed, not being refined, for every cwt. . . . .	0	16	4
Brown Sugar, being Muscovado or Clayed, or any other Sugar not being equal in quality to White Clayed, for every cwt. . . . .	0	14	0
Molasses, for every cwt. . . . .	0	5	3

2. On Sugar the growth and produce of any other British Possession within the limits of the East India Company's Charter:

	From and after the Act of 1846, to 5th July, 1847, inclusive.	From and after 5th July, 1847, to 5th July, 1848, inclusive.	From and after 5th July, 1848, to 5th July, 1849, inclusive.	From and after 5th July, 1849, to 5th July, 1850, inclusive.	From and after 5th July, 1850, to 5th July, 1851, inclusive.	From and after 5th July, 1851.
Candy, Brown or White, Double Refined Sugar, or Sugar equal in quality to Double Refined, for every cwt. . . . .	1 6 2	1 5 6	1 4 4	1 3 3	1 2 0	The same duties as on Candy, Sugar, and Molasses, the produce of other British Colonies.
Other Refined Sugar, or Sugar rendered by any process equal in quality thereto, for every cwt. . . . .	1 3 4	1 2 8	1 1 8	1 0 8	0 19 8	
White Clayed Sugar, or Sugar rendered by any process equal in quality to White Clayed, not being Refined, for every cwt. . . . .	1 0 5	0 19 10	0 18 11	0 18 1	0 17 2	
Brown Sugar, being Muscovado, or Clayed, or any other Sugar, not being equal in quality to White Clayed, for every cwt. . . . .	0 17 6	0 17 0	0 16 3	0 15 6	0 14 9	
Molasses, for every cwt. . . . .	0 6 6	0 6 4	0 6 1	0 5 9	0 5 6	

3. On Sugar, the growth and produce of any Foreign country, and which shall be imported into the United Kingdom, either from the country of its growth or from some British Possession, having first been imported into such British Possession from the country of its growth:

	From and after the Act of 1846, to 5th July, 1847, inclusive.	From and after 5th July, 1847, to 5th July, 1848, inclusive.	From and after 5th July, 1848, to 5th July, 1849, inclusive.	From and after 5th July, 1849, to 5th July, 1850, inclusive.	From and after 5th July, 1850, to 5th July, 1851, inclusive.	From and after 5th July, 1851.
Candy, Brown or White, Double Refined Sugar, or Sugar equal in quality to Double Refined, for every cwt. . . . .	1 11 6	1 10 0	1 7 9	1 5 6	1 3 3	The same duties as on Candy, Sugar, and Molasses, the produce of other British Colonies.
Other Refined Sugar, or Sugar rendered by any process equal in quality thereto, for every cwt. . . . .	1 8 0	1 6 8	1 4 8	1 2 8	1 0 8	
White Clayed Sugar, or Sugar rendered by any process equal in quality to White Clayed, not being Refined, for every cwt. . . . .	1 4 6	1 3 4	1 1 7	0 19 10	0 18 1	
Brown Sugar, being Muscovado, or Clayed, or any other Sugar, not being equal in quality to White Clayed, for every cwt. . . . .	1 1 0	1 0 0	0 18 6	0 17 0	0 15 6	
Molasses, for every cwt. . . . .	0 7 10	0 7 6	0 6 11	0 6 4	0 5 9	

4. That the Bounties or Drawbacks following be paid and allowed upon the exportation of certain descriptions of Refined Sugar from the United Kingdom (that is to say),

	£	s.	d.
Upon Double Refined Sugar, or Sugar equal in quality to Double Refined, for every cwt. . . . .	1	0	0
Upon other Refined Sugar in Loaf, complete and whole, or Lumps duly Refined, having been perfectly clarified and thoroughly dried on the stove, and being of an uniform whiteness throughout, or such Sugar powdered, crushed, or broken, for every cwt. . . . .	0	17	0
Upon Bastard or Refined Sugar, broken in pieces, or being ground, or powdered Sugar powdered, or crushed or broken, for every cwt. . . . .	0	14	0

## ACTS FOR THE SOCIAL IMPROVEMENT AND COMFORT OF THE PEOPLE.

It was a gratifying feature of the last session of Parliament, that, although engaged with questions of the utmost importance, commercial and political, it yet found time to frame and carry measures calculated to augment the comforts of the people, and to improve their health and physical condition generally.

One measure eminently deserving this character was the "Act to Encourage the Establishment of Public Baths and Wash-houses." It is a fact beyond dispute that bathing has not only a beneficial effect upon the body, by promoting circulation, and facilitating the healthy action of the functions, but it also strengthens the mental faculties.

According to this Act the Council of any Municipal Borough in England, Wales, or Ireland; and also the Vestry in any parish in England or Wales, not included in a Municipal Borough, may carry the plan into effect at the expense of the rates. The acquisition of lands is rendered easy by the facilities afforded; and the Public Works Loan Commissioners will grant loans, to be repaid by twenty yearly instalments.

It is enacted that, when a parish agrees on the adoption of these plans, there must be obtained the approval of the Home Secretary, who is also to approve the by-laws; and before any public lands are appropriated, or any loans obtained, the consent of the Treasury must be procured. With these exceptions, the local authorities are left entirely without control; on them the duty devolves of considering the views laid down by the Legislature, so as to carry them out in the most judicious and advantageous manner.

This bill also empowers any Town Council, or other similar body, having jurisdiction in a corporate town, Drainage Commissioners, or Poor-law Guardians, on receipt of two medical men's certificate, vouching the existence of any public nuisance, to lodge a complaint with two Justices of the Peace. The Justices, on being satisfied of the validity of such complaint, are required to make an order for the cleansing, whitewashing, or purifying, of any dwelling-house, or other building, or for the removal of the nuisance complained of in the certificate. If this order is disobeyed, the complaining parties are to have the power of entering upon the premises, and of themselves carrying these remedial measures into effect. The expenses so incurred may be recovered summarily from the owners of the property in question.

The President of the Council or any three members of that Board (of whom the Lord President or one of the Secretaries of State is to be one) are empowered to issue orders at any time to prevent the spreading of contagious or epidemic diseases in England.

All penalties leviable under this Act are to be applied towards the relief of the poor. All orders made by the Privy Council are periodically to be laid before Parliament. Provision is made for the payment out of the poor-rates of such expenses as are not defrayed by the owners of the property complained against.

## RAILWAY GAUGES.

THE Act for Regulating the Gauge of Railways, which passed last Session, after stating the expediency of defining that Gauge, declares that hereafter it will not be lawful, except in cases mentioned, to construct any railway for the conveyance of passengers on any gauge other than four feet eight inches and half an inch in Great Britain, and five feet three inches in Ireland. The exceptions are set forth, and on certain railways the broad gauge is to be used. By the 4th provision it is declared that after the passing of the act the gauge of any railway used for the conveyance of passengers is not to be altered. Railways constructed contrary to this act may be abated. There is a provision for the recovery of penalties.

## THE ACT FOR THE DISSOLUTION OF RAILWAY COMPANIES.

THE Act 9 and 10 of Victoria, cap. 28, to facilitate the dissolution of certain Railway Companies, provides, by the 1st Section, that persons who shall have entered into a contract for the formation of a Company for making a Railway, &c., may dissolve the same under certain conditions therein named.

In the 2nd Section, it is enacted that the Committee, &c., may call meetings of shareholders to consider the propriety of a dissolution.

Section 3 provides that the shareholders may require the Committee to call a meeting, and in default may call it themselves.

Sections up to 14 relate chiefly to the mode of taking the votes.

The 15th Section is the most important of the Act. It is as follows:—"And be it enacted, that to constitute a meeting under the provisions of this Act for the purpose of deciding on a dissolution, or bankruptcy, persons representing at least one third part of the shares in the undertaking actually issued or given, either as shares, scrip, or receipts, must be present and vote; and that for the purpose of effecting a dissolution, and as to Bankruptcy, there must be either a majority of the votes of the whole scrip of the Company issued as aforesaid, or at least three-fifths of the votes of persons present and voting, either as shareholders or proxies, in favour of the motion for dissolution, and for the bankruptcy, if so resolved on."

By Section 18, it is enacted that no votes shall be allowed except for scrip, &c., actually issued or given before 31st March, 1846.

According to Section 26, if the proposal of dissolution be rejected, no new meeting can be called for six months to consider the question.

Section 27, provides that any three of the Committee, or any creditor or creditors, may petition for a fiat in bankruptcy.

It is also provided, that, after the dissolution of any Company, no action, &c., can be brought by any attorney or solicitor, until one month after a bill of fees shall have been delivered.

Another important clause enables defendants to recover contributions from their Committeemen:—"And be it enacted, that where the dissolution of a Company shall have been resolved under this Act, if judgment shall have been recovered, or shall afterwards be recovered in any action against any member of the Committee, for any debt due from such Company, or from such Committee, in respect of the undertaking, the member against whom such judgment shall have been recovered shall be entitled at law to a contribution from each of the other members of such Committee towards the payment of the moneys recovered by such judgment, and of all costs and expenses in relation thereto, of such a share of the whole amount of such moneys, costs, and expenses, as would have been borne by such respective members upon an equal contribution by all the members of such Committee, and may recover the contributions to which he may be so entitled, or any of them, by action or actions of debt, or on the case against all or any of such other members of such Committee, but so that no such member shall be liable in any such action as aforesaid for more than the share to which he shall respectively be liable to contribute under this provision."

## THE POOR REMOVAL BILL.

THIS bill, which excited so much discussion in the House of Commons, consists but of 10 clauses. Clause 1 enacts that no person shall be removed from any parish in which he or she shall have resided for five years. Clause 2, that no widow shall be liable to be removed for twelve months after the death of her husband. Clause 3, that no child, whether legitimate or illegitimate, under the age of 16 years, shall be liable to be removed, except with its father or mother. Clause 4 and 5, that sick persons shall not be liable to be removed, except the Justices are satisfied that the sickness or accident will produce permanent disability, but that no settlement is to be gained by their non-removal. Clause 6 imposes a penalty not exceeding £5, nor less than £2, for unlawfully procuring the removal of poor persons to other parishes. Clause 7 provides for the delivery of paupers under a warrant of removal. Clause 8 constitutes this Act part of the Act of 4 and 5 William IV. for the Amendment and better Administration of the Poor Laws; and clauses 9 and 10 limit this Act to England.

## APPLICATION FOR LOCAL ACTS.

It is provided by the New Act of Parliament "for making preliminary inquiries in certain Cases of Applications for Local Acts," that in any case where it is intended to make an application to Parliament for an act for the establishment of any waterworks, or for draining, paving, cleansing, lighting, or otherwise improving any town, district, or place; or for making, maintaining, or altering any burial-ground or cemetery; or for continuing, altering, or enlarging any of the powers or provisions contained in any act relating to such purposes, a notice in writing of such intention to apply to Parliament in the next ensuing session for an act for any of the above objects, shall, on or before the last day of November,—or, in case such day shall fall on a Sunday, then on the next day preceding in each year,—be delivered at the office of the Woods and Forests, with all information on the subject. The Commissioners of the Woods and Forests are to appoint a surveying officer to make inquiries on the spot of the intended work, who may require the attendance of witnesses. The expenses are to be paid by the promoters. It is expected that this measure, founded on the report of a Select Committee on Private Bills, will greatly facilitate local acts, and save considerable expense.

## THE SMALL DEBTS ACT.

THIS act may be considered as an experiment for the purpose of effecting the important object of recovering debts at a small expense. The monstrous charges for recovering debts under the old system, were disgraceful to a country like England, which boasts of its justice and equity.

This act contains 143 provisions, and four schedules.

It would seem that the new law will not affect the Palace Court, which possesses a jurisdiction to £20, as it is not considered one "of her Majesty's Superior Courts of Record;" but, with regard to the superior courts, persons bringing actions after the passing of the Act (28th August), "for which a plaintiff might have been entered in any court holden under this Act," are to be liable, under certain circumstances, to the payment of costs.

The primary object of the Act was to prevent the denial of justice, which existed in respect to claims under £20, as, in innumerable cases, the costs exceeded the debt, and insolvency resulted; and in other cases debtors escaped with impunity, because of the expense of the remedy. By the 58th section, the jurisdiction of the County Court is to extend to "debt or damage" of not more than £20, whether on balance or otherwise, with the exception, among other things, of actions for malicious prosecutions, libel, slander, seduction, or breach of promise of marriage; but false imprisonment and assault cases are not excluded; and, by another provision, the parties to the action, their wives, and all other persons, may be examined.

By the 78th section, all forms of procedure to be used in the County Courts under the Act, with the general rules for regulating the practice and proceedings of the same, are to be framed by the Judges of the superior courts of Common Law at Westminster.

It is provided by the 129th clause, that if any action shall be commenced in any of the superior Courts of Record (other than those specified) for any cause for which a plaintiff might have been entered in any court holden under the Act, and a verdict be found for the plaintiff for a sum less than £20, if the said action be founded on contract, or less than £5, if it be founded on fact, the plaintiff shall have judgment to recover the sum only, and no costs; and if a verdict shall not be found for the plaintiff, the defendant shall be entitled to his costs, as between attorney and client; "unless, in either case, the judge who shall try the cause shall certify on the back of the record, that the action was fit to be brought in such superior court."

An important part of the Act is that relating to execution. Our readers are, perhaps, aware that, under the Common Law, as administered by the Courts at Westminster, a party who had obtained a judgment was entitled to take out execution immediately for the whole amount of debt and costs. It was optional with him to sue out a writ against the goods, or against the body, of his debtor; and, if he failed in pursuing the goods, he might afterwards avail himself of his remedy against the person.

Such right to proceed at once to execution was not controlled by any discretionary power of the Court; though, in some cases, the Judge who tried a cause at Nisi Prius was enabled to give speedy execution to a successful plaintiff—that is, to allow him to take it immediately after the verdict.

The Small Debts Act gives a discretionary power to the Judge, which had been previously conferred upon various Commissioners of Courts of Request, to order the sum recovered to be paid by instalments; and, in such case, execution is not to issue till after default in paying the first instalment, and then only by order of the Judge, for the whole or a part, as he may think proper. Whenever execution is awarded by the Judge, he is empowered to prescribe the times and manner in which the levy is to be made. Thus, in effect, the whole control of this process is placed in his hands.

But, it is in execution against the body, that the most important change is introduced.

In 1837, arrest on mesne process was abolished, a power being reserved to the Judge to issue a *capias*, on an affidavit by the plaintiff of his belief that the debtor was about to leave the kingdom. The next step was the abolition of arrest on final process in cases exceeding £20, which was effected by the 7 and 8 Victoria. A power of committal was conferred upon the Judge, in certain cases of fraud; though, owing to the clumsy manner in which the act was drawn, it was found impossible for any Judge to exercise such power. In 1845, it was found that something must be done for the relief of small creditors, who suffered greatly under this statute, and, accordingly, the 8 and 9 Victoria was passed, entitled, "An Act for the Better Securing the Payment of Small Debts;" whereby the creditor was enabled to apply to the Court of Bankruptcy to obtain a discovery of the property of his debtor, and punishment in case of fraud. The statute afforded a partial remedy for the evil; yet it seemed a strange and circuitous way

of proceeding, to drive a plaintiff to the Court of Bankruptcy, when the proper remedy could be more promptly and efficaciously administered by the Court in which his judgment was obtained.

The Small Debts Act makes a more ample provision for the security of the creditor. It enacts, "that any person who has obtained a judgment may summon his debtor before the County Court, where he may be examined touching his estate and effects, the circumstances under which he contracted the debt, the expectation which he had of paying it, and other matters in relation thereto; and, if it shall appear to the Judge that he has obtained credit on false pretences, or fraudulently, or contracted his debt without reasonable expectation of paying it, or in certain other cases of fraud or improper conduct, the Judge shall have power to commit him to prison for any period not exceeding forty days." This will be found to be a most important provision; and it will, no doubt, have a salutary effect in the transactions of small traders.

A most important feature of the Act is the very moderate scale of fees authorised in all proceedings under it. The Act, indeed, appears to be a most equitable one, as it will be seen that there is a different scale of charges for debts amounting to £1, £2, £5, £10, and upwards.

The scale is as follows:—

FEES.	AMOUNT OF DEMAND.					
	Not exceeding 20s.	Exceeding 20s. and not exceeding 40s.	Exceeding 40s. and not exceeding £5.	Exceeding £5, and not exceeding £10.	Exceeding £10.	Exceeding £10.
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
<b>JUDGE'S FEES.</b>						
Every summons .. .. .	0 3	0 6	1 0	2 0	3 0	3 0
Every hearing without a jury .. .. .	1 0	1 6	2 6	7 6	10 0	15 0
Every hearing or trial with a jury .. .. .	2 0	3 0	5 0	10 0	15 0	20 0
Every order or judgment, or application for an order .. .. .	0 3	0 6	1 0	2 0	3 0	3 0
<b>CLERK'S FEES.</b>						
Entering every plaint and issuing the summons thereon .. .. .	0 3	0 6	1 0	2 0	3 0	3 6
Every subpoena, when required .. .. .	0 3	0 6	0 9	1 0	1 6	1 6
Every hearing, trial, or nonsuit without a jury .. .. .	0 4	0 6	1 0	1 6	2 0	3 6
Adjournment of any cause .. .. .	0 3	0 4	0 6	1 0	2 0	2 0
Entering and giving notice of special defence .. .. .	0 3	0 6	1 0	1 6	2 0	2 0
Swearing every witness for plaintiff or defendant .. .. .	0 2	0 2	0 3	0 4	0 6	1 0
Entering and drawing up every judgment and order, and copy thereof .. .. .	0 3	0 6	1 0	1 6	2 6	3 6
Payment of money in or out of Court, whether or not by instalments at different times, including notice thereof, and taking receipt .. .. .	0 2	0 4	0 6	—	—	—
Paying money into Court, and entering same in books, and notice thereof, or of sum in full satisfaction having been paid into Court, each instalment or payment .. .. .	—	—	—	0 6	0 8	1 0
Payment of money out of Court, and taking receipt, exclusive of stamp .. .. .	—	—	—	0 9	1 0	1 6
Every search in the books .. .. .	0 2	0 2	0 4	0 6	1 0	1 0
Issuing every warrant, attachment, or execution .. .. .	0 6	0 6	1 0	1 6	2 6	3 0
Supersedeas of execution, or certificate of payment, or withdrawal of cause .. .. .	0 3	0 6	0 6	1 0	1 6	2 0
Warrant of commitment for an insult or misbehaviour in Court .. .. .	1 0	1 0	1 0	1 0	1 0	1 0
Entering and giving notice of jury being required .. .. .	0 6	0 9	1 0	1 6	2 0	2 6
Issuing summons for jury .. .. .	0 6	0 9	1 0	1 6	2 0	2 6
Swearing jury .. .. .	0 6	0 8	0 10	1 0	1 6	1 6
Every hearing, trial, or nonsuit with a jury .. .. .	1 0	1 6	2 0	3 0	5 0	7 6
Taking recognisance or security for costs .. .. .	—	—	—	2 0	2 6	3 0
Inquiring into sufficiency of sureties proposed, and taking bond on removal of plaintiff, or grant of new trial, or other occasion .. .. .	2 6	2 6	2 6	2 6	2 6	2 6
Taking costs .. .. .	—	—	—	1 0	2 0	3 0
<b>HIGH BAILIFF'S FEES.</b>						
Calling every cause .. .. .	0 2	0 2	0 4	0 6	1 0	1 6
Affidavit of service of summons out of the jurisdiction .. .. .	0 2	0 3	0 6	1 0	1 6	2 0
Serving every summons, order, or subpoena within one mile of Court-house .. .. .	0 3	0 4	0 6	0 10	1 0	1 6
If above one mile, then extra for every other mile .. .. .	0 2	0 2	0 3	0 4	0 4	—
Execution of every warrant, precept, or attachment against the goods or body, within one mile of the Court-house .. .. .	1 6	1 6	3 6	4 0	5 0	7 0
If above one mile, then extra for every other mile .. .. .	0 3	0 3	0 4	0 6	0 6	0 6
If two officers be necessary in the judgment of the Court, then extra, within one mile of the Court-house .. .. .	1 0	1 6	2 0	2 0	2 6	3 0
If above one mile, then extra for every other mile .. .. .	0 3	0 3	0 4	0 6	0 6	0 6
Keeping possession of goods till sale, per day, not exceeding five days .. .. .	1 0	1 6	2 0	2 0	2 6	3 0
Carrying every delinquent to prison, including all expenses and assistants, per mile .. .. .	1 0	1 0	1 0	1 0	1 0	1 0
Issuing warrant to clerk of another Court .. .. .	1 0	1 6	2 0	2 6	3 0	3 6

N.B.—Where the plaintiff recovers less than his claim, so as to reduce the scale of costs, the plaintiff to pay the difference. The several fees payable on proceedings in replevin to be regulated on the same scale, by the amount distrained for; and on proceedings for the recovery of tenements, by the yearly rent or value of the tenement sought to be recovered.

## NEW DOMESTIC HINTS.

FROM "SOYER'S GASTRONOMIC REGENERATOR."

## DIRECTIONS FOR LARDING.

Choose the firmest bacon you can obtain, quite fat, and not at all red, or it would break and cause a deal of trouble. To cut it, take off the piece of lean at the bottom, lay it upon a board with the rind upwards, and beat gently with a cutlet bat, trim the sides, and cut it into bands the breadth that you may require your lardons in length; if for a fillet of beef, two inches; for fricandeau, turkey, poularde, fowl, pheasant, or sweetbread, an inch and a half; and for lamb's sweetbreads much smaller. Take one of the bands, place it before you with the rind downwards, and with a sharp knife cut it in slices, (but not separating it from the rind), of the thickness you require for the article you are about to lard, then place your hand at the top, press lightly, and draw your knife straight along as if cutting the bacon in slices, so as to form the lardons square at each end, commencing cutting from the heel of the knife, and finishing at the point.

## POULTRY.

Never use turkeys before Michaelmas, and not after the latter end of March. Ditto turkey poult before the end of June, and not after September. Capons, poulards, pullets, and fowls, use all the year round. Begin about March with the spring chickens, till the beginning of July.

Geese are in almost all the year round. Goslings, or green geese, commence early in the spring, and are called so till the end of September; thus there is hardly any difference between them and the Michaelmas geese.

Ducks and ducklings the same.

Rabbits and pigeons may be used all the year round; but it is only in the early part of the spring that I use tame rabbits.

Guinea-fowls are used when pheasants go out, which is about the latter end of January, and are used till the end of May. Their eggs are very good, more delicate than the common ones.

Never use grouse before the 14th Aug., and after the 22nd December.

Black cocks and grey hens about the same time as grouse, but they are more uncertain.

Parmigans are sent from Norway about the middle of January, and continue till March, but that depends much upon the weather.

Though the shooting season for partridges is the 1st of September, and lasts till the end of January, I never cook one before the 3rd, except being desired to do so, but I often keep some for three weeks after the shooting season is over.

The same with pheasants, which begins from the 1st of October till the end of January. By hanging them by the necks and putting a piece of garlic in the beak and a little cayenne, I one cold winter kept one six weeks after the shooting time had expired, which I afterwards presented to a party of real gourmets, who said it was the best they had partaken of during the season.

Use wild ducks, widgeons, teal, pintails, larks, golden plovers, snipes, woodcocks, from the commencement of November till the latter part of March, after which the flesh becomes rank and unfit for the table.

Young pea-fowls are very good, and make a noble roast, and are in season from January till June, but they are very uncertain.

Plovers' eggs, my favourite, an unparalleled delicacy, come about the middle of March, and are not considered good after the latter end of May; but when I can get them fresh in June, I do not discontinue their use, because they are, in my estimation, worthy of the patronage of the greatest gourmet.

## FISH.

For the last few years there has been quite an alteration in the description of the seasons for these golden and silvery inhabitants of the deep.

Except the cod-fish, which come in September, and by strictness of rule must disappear in March, the season for all other sea-fish becomes a puzzle; but the method I follow during the season is as follows:

Crimped Gloucester is plentiful in June and part of July, but it may be procured almost all the year round.

Common salmon from March to July.

Salmon peale from June to July.

Spey trout from May to July.

Sturgeon, though not thought much of, is very good in June.

Turbot are in season all the year round.

John Dories depend entirely upon chance, but may be procured all the year round for the epicure, May excepted.

The original season of Yarmouth mackerels is from the 12th of May till the end of July; now we have Christmas mackerel; then the west of England mackerel, which are good at the beginning of April.

Haddock and whiting all the year round.

Skate all the winter.

Smelts from the Medway are the best, and are winter fish; the Yarmouth and Carlisle are good, but rather large; the Dutch are also very large, which often lose in the estimation of the epicure.

Brill is like turbot as to season.

Slips are similar to soles, good all the year round.

Gurnets are rather a spring fish.

Flounders and diamond plaice are in full season from June to July.

Red mullets vary very much now, but the beginning of the season was formerly the 12th of May; we had none this year, except at a very extravagant price. Always use them when they are to be obtained.

Fresh herrings are in season from November to January.

River eels all the year round.

Lobsters in the spring and part of the summer.

Prawns ditto.

Crabs are best in May.

Oysters begin in August, but are not very good till September.

Barrelled oysters begin on the 15th of September, and last till the end of February.

Barrelled cod, Lent fish, are best in winter or about March.

Sprats come in about the 8th of November.

## HOW EVERYTHING SHOULD BE IN COOKING.

All clear soup must not be too strong of meat, and must be of a light brown, sherry, or straw colour.

All white or brown thick soups must be rather thinnish, lightly adhering to the back of the spoon.

All purées must adhere little more to the back of the spoon.

Any Italian paste must be very clear, rather strong, and the colour of pale sherry.

All kinds of fish sauce should be thicker for boiled fish than for broiled or fried. Brown sauce should be a little thinnish and the colour of a horse-chesnut.

White sauce should be of the colour of ivory and thicker than brown sauce.

Cream or Dutch sauce, must be rather thickish, and cannot be too white.

Demi-glacé requires to be rather thin, but yet sufficiently reduced to envelop

any pieces of meat, game, poultry, &c., with which it is served.

Every description of fish should be well done, but not over-boiled, broiled, stewed, or fried.

Beef and mutton must be underdone, even for joints, removes, and entrées.

Lamb requires to be more done.

Veal and pork must be well done.

Venison must be underdone, red in the middle, and full of gravy, but not raw.

Poultry, either broiled, stewed, or roasted, must be done thoroughly, not cutting in the least red, but must still be full of gravy.

Pheasants and partridges must be well done through, yet full of gravy.

Grouse, black cocks, grey hens, and ptarmigans, must cut reddish, with plenty of gravy, but not too much underdone.

All kinds of water-fowl must be very much underdone, so that the blood and gravy follow the knife in carving.

Plovers must be rather underdone, but done through.

Rabbits and pigeons must be well done.

Second-course savoury dishes must be rather highly seasoned, but with a little moderation.

Pastry should, when baked, be clear, light and transparent, and of a beautiful straw colour; the body of a croustade the same.

Large pies, timbales, and casseroles of rice must be of a yellowish brown colour.

Jellies require to be very white and transparent for fruits, and not too firm, but better so than too delicate.

Orange jellies should be of a deep orange colour, and all fruit jellies as near as possible to the colour of the fruit.

Creams should be very light and delicate, but fruit creams must be kept of the colour of the fruits they are made of.

For all the demi-glacé removes the ice must be firm, but not the least hard.

All kinds of soufflé or fondu must be well done through, or they would be very indigestible, clog the delicate palate, and prevent the degustation of the generous claret which flows so freely after dinner on the table of the real epicure.

I recommend sugar in almost all savoury dishes, as it greatly facilitates digestion and invigorates the palate, but always increase or diminish the quantity according to the taste of your employer.

I often introduce onions, eschalots, or even a little garlic in some of my most delicate dishes, but so well blended with other flavours that I never have a single objection even by those who have a great dislike to it.

Horseradish and herbs of every description may always be used with discretion to great advantage.

Contrary to the expressed opinion of every other previous publication, I say that too much seasoning is preferable to too little, while you fear over-seasoning you produce no flavour at all; by allowing each guest to season for himself, your sauce attains a diversity of flavours. The cook must season for the guest, not the guest for the cook.

I have always found great advantage in dressing the greatest part of my entrées on a thin roll of mashed potatoes; this has never been found objectionable, as it is so thin that it is imperceptible when covered with the sauces, and serves to prevent any entrées dressed in crown from being upset, before going on table, by the carelessness of the servant. The mashed potatoes which are to be used for dishing up are simply prepared as follows:—Plain, boil, or steam six or eight large mealy potatoes; when well done peel and put them into a stewpan with two ounces of butter, and a little salt; then with the prong of a fork whisk them till quite in purée; then add two table-spoonsful of milk, work up with a small wooden spoon till forming a paste; then lay a small quantity on a clean cloth, roll it to the circumference of a fourpenny or sixpenny piece, and form a round with it in your dish according to the size of the entrée; alter the proportion according to the size of the flanc or remove.

## NEW AND ECONOMICAL LOBSTER SAUCE.

Break up a fresh lobster, use the solid flesh for salad or any other purpose, pound the soft part and shell together (in a mortar) very fine, place the whole in a stewpan, cover with a pint of boiling water, place over the fire, and let simmer ten minutes, when pass the liquor through a hair sieve into a basin, and use for making melted butter as in the last, to which add a little cayenne pepper and a piece of anchovy butter the size of a walnut; if any red spawn in the lobster, pound and mix it with a small piece of fresh butter, and add to the sauce with a little lemon-juice when upon the point of serving; an anchovy pounded with the shells of the lobster would be an improvement, some of the flesh may be served in the sauce.

## SHRIMP SAUCE.

Is very excellent made by pounding half a pint of shrimps with their skins, boiling ten minutes in three parts of a pint of water, finishing as directed for lobster sauce, and always serving very hot.

## ANCHOVY SAUCE.

Is made by adding a spoonful of Harvey sauce and two of essence of anchovy, with a little cayenne, to half a pint of melted butter; shrimps, prawns, or even blanchéd oysters may be served in it.

## WHITE AND BROWN SAUCES.

Cut and chop a knuckle of veal, weighing about four pounds, into large dice; butter the bottom of a large stewpan with a quarter of a pound of butter, add two onions, a small carrot, a turnip, three cloves, half a blade of mace, a bay-leaf, and a sprig of thyme, and six of parsley tied in a bunch; add a gill of water, place over a sharp fire, stirring round occasionally, until the bottom of the stewpan is covered with whitish glaze, when fill up with three quarts of water, add a good teaspoonful of salt, and let simmer at the corner of the fire an hour and a half, keeping well skimmed, when pass it through a hair sieve into a basin; in another stewpan put a quarter of a pound of butter, with which mix six ounces of flour, stirring over the fire about three minutes, take off, keep stirring until partly cold, when add the stock all at once, continually stirring and boiling for a quarter of an hour; add half a pint of boiling milk, stir a few minutes longer, add a little chopped mushrooms if handy, pass through a hair sieve into a basin, until required for use, stirring it round occasionally until cold; the above being a simplified white sauce.

For a brown sauce use the same proportion as for the white, but having beef instead of veal for the stock, which must be made brown by placing four large onions cut in halves at the bottom of the stewpan, which must be well buttered, placing the meat over, standing upon the fire, and drawing down to a brown glaze before filling up, the thickening must also be made brown, by stirring a few minutes longer over the fire, and the milk omitted. Sometimes I make both stocks in the same stewpan, pass one half for the white sauce, and put a couple of burnt onions into the remainder, allowing it to simmer an hour longer, when pass and use for a brown sauce.

## TO MAKE A COLOURING OR BROWNING FROM SUGAR.

Put two ounces of whitepowdered sugar into a middling-sized stewpan, which place over a slow fire, when beginning to melt stir round with a wooden spoon until getting quite black, when set it in a moderate oven upon a trivet about twenty minutes, pour a pint of cold water over, let it dissolve, then cork it up in a bottle for use.

## THE DEADLY NIGHTSHADE.

THE Deadly Nightshade (*Atropa Belladonna*) is indigenous to Great Britain, and usually met with in sheltered situations, hedges and wasteground, on a calcareous soil. The plant dies down to the ground every winter, shooting forth early in the spring, growing rapidly, and with great luxuriance; stems branching, and slightly downy, with large healthy-looking leaves, mostly two together of unequal size, ovate and acute, very different in appearance from all other kinds of Nightshade. The flowers which appear in June are imperfectly axillary, solitary, stalked, drooping, dark full purple in the border, paler downwards, about an inch long, and have no scent. The berries are of a rich purplish black, sweetish, about the size of a small cherry; are ripe in August, and of a deadly narcotic quality.

THE DEADLY NIGHTSHADE.—(*Atropa Belladonna*.)

*Atropus* was the name of one of the Fates in the Heathen Mythology, and as her duty was especially to cut short the thread of human life, this poisonous plant is very appropriately named after her; but why *belladonna*, which signifies a beautiful lady, was added, is not known.

The effect that is usually produced upon any one who has eaten of the berries is to dilate the pupil of the eye, in a most extraordinary manner; obscurity of vision, giddiness, delirium, and death, soon follow. It has been supposed that it was the juice of this plant which produced such remarkable and fatal effects on the Roman soldiers, during their retreat from the Parthians. Buchanan relates that the Scots mixed the juice with bread and drink, which, by their truce, they were to supply the Danes, which so intoxicated them, that the Scots killed the greatest part of Sweno's army while asleep. Shakspeare is supposed to allude to the plant under the name of the *insane root*, in *Macbeth*. And we have had many recent illustrations of its fatal effects upon persons who have ignorantly eaten of the berries. In August, 1844, several persons became alarmingly ill, and were with difficulty restored, one dying. In August of 1846, no less than three persons lost their lives from eating berries, purchased of a man in the streets; the man who sold them was taken up and tried for his life; but, by the advice of his counsel, he pleaded *guilty* to the minor offence of manslaughter, and received six months imprisonment.

The remedy in a case of poisoning, is to empty the stomach as quickly as possible. Domestic emetics are always at hand, in mustard and salt. A dessert spoonful of flour of mustard, or a table spoonful of salt, may be taken, stirred up in a tumbler full of warm water, tickling the throat with a feather dipped in oil; but the stomach-pump should always be preferred when it can be obtained. After which, drinks of vinegar and water, or lemon juice in green tea, should be given every ten minutes.

Our engraving, (Fig. 1) represents a flower cut open, showing the position of the stamens; fig. 2, the calyx with the pistil; and fig. 3, a berry cut in half, to show its two cells, in each of which are several seeds.

## TO PRESERVE CUT FLOWERS.

The most simple rules are, not to put too many flowers in a glass, to change the water every morning, and to remove every decayed leaf as soon as it appears, cutting off the ends of the stems occasionally, as soon as they show any symptoms of decay. A more efficacious way, however, is to put nitrate of soda in the water; put about as much as can easily be taken up between the forefinger and thumb, into the glass every time the water is changed, will preserve cut flowers in all their beauty for above a fortnight. Nitrate of potash, (that is common saltpetre,) in powder, has nearly the same effect, but is not quite so efficacious.—*Mrs. Loudon*.

## TO HASTE THE BLOWING OF FLOWERS.

The following liquid has been used with great success; this is, indeed, what is usually sold under the name of "liquid guano":—Sulphate or nitrate of ammonia, four ounces; nitrate of potash, two ounces; sugar, one ounce; hot water, one pint; dissolve, and keep it in a well-corked bottle. For use—Put eight or ten drops of this liquid into the water of a hyacinth glass or jar, for bulbous-rooted plants, changing the water every twelve or fourteen days. For flowering plants in pots, a few drops must be added to the water given to them: rain water is preferable for the purpose.

## SHERRY COBBLER.

(Canadian Receipt)

Take a lump of ice; fix it at the edge of a board; rasp it with a tool made like a drawing-knife or carpenter's plane, set face upwards. Collect the fine raspings—the fine raspings, mind—in a capacious tumbler; pour thereon two glasses of good sherry, and a good spoonful of powdered white sugar, with a few small bits, not slices, of lemon, about as big as a gooseberry. Stir with a wooden macerator. Drink through a tube of macaroni or vermicelli.

## ADULTERATIONS OF BREAD AND FLOUR.

This is often carried to a fearful extent: Mr. Accum says—"The bakers' flour is very often made of the worst kinds of damaged foreign wheat, and other cereal grains mixed with them in grinding the wheat into flour. In this capital no fewer than six distinct kinds of wheat flour are brought into the market. They are called fine flour, seconds, middlings, fine middlings, coarse middlings, and twenty-penny flour. Common garden beans and peas are also frequently ground up among the London bread flour. Caution.—If you purchase bread from the bakers, by all means buy the best. When you make it yourself, however, various additions may be made of a wholesome kind, that will render it cheaper. Thus, mashed potatoes, ground bran, potato farina, and several other articles may be added at pleasure. Mixing the flour up with a decoction of bran, pumpkins, Iceland moss, and some other similar substances has been recommended; and it is said that flour so mixed, will yield one quarter more bread than when water alone is used, and that it will keep good for some time.

## BUTTER.

Rancid butter is butter in a state of decomposition, and capable of producing dangerous symptoms when eaten. Two cases of poisoning by bad butter are detailed in the Paris "Journal of Chemistry and Medicine," 1842. Rancid butter may be restored by melting it in a water-bath, with some coarsely powdered animal charcoal (which has been thoroughly freed from dust by sifting), and straining through clean flannel.

## TO KEEP CHEESE.

When a whole cheese is cut, and the consumption small, it is generally found to become unpleasantly dry and to lose flavour before it is consumed. This is best prevented by cutting a sufficient quantity for a few days' consumption from the cheese, and to place the remainder in a cool place, rather damp than dry, spreading a thin film of butter over the cut surface, and covering it with a cloth to keep off the dirt. This removes the objection existing in families against purchasing a whole cheese at a time. The common practice of buying cheese in small quantities should be avoided, as not only a higher price is paid for any given quality, but there is little likelihood of obtaining exactly the same flavour twice running. Should cheese become too dry to be agreeable, it may be used for steaming, or when grated cheese is wanted.

## CHOICE OF FISH.

In the choice of every kind of fish, stiffness, brightness of the eyes, and redness of the gills, may be regarded as invariable signs of freshness. A peculiar elasticity will also be perceived in fish recently caught; little or no permanent impression being made by the ordinary pressure of the fingers, from the flesh immediately rising when the pressure is withdrawn. Fresh fish also lie in a partly curled position, and never quite straight, as is the case when they have been kept for some time. Thickness and fleshiness are deemed marks of the good condition of all fish.

Of all the various substances used as aliments by man, fish are the most liable to run into a state of putrefaction, and should, therefore, be only eaten when perfectly fresh. Those that are whitest and most flaky when cooked, as whiting, cod, flounders, soles, haddock, turbot, &c., are the most easily digestible; and those abounding with oily matter, as salmon, eels, herrings, &c., are most nutritious, though more likely to offend the stomach. Salt water fish has been said to be more wholesome than river fish, but without sufficient reason. Salted fish is very hard of digestion unless well cooked. Acid sauces and pickles are the proper additions to fish, from their power of retarding the progress of putrefaction, and of correcting the tendency of large quantities of oil and butter.

## PICKLES.

In the preparation of pickles, it is highly necessary to avoid employing metallic vessels; as both vinegar and salt corrodes brass, copper, lead, &c., and thus become poisonous. When it is necessary to heat or boil vinegar, it should be placed in a stone jar in a water bath, or on a stove. Glazed earthenware should be avoided either for making or keeping the pickles in, as the glazing usually contains lead. Pickles should be kept from the air as much as possible, and only touched with wooden spoons. They are also better preserved in small jars, or bottles, than large ones, as the more frequent opening of the latter exposes them too much. If a green colour be desired, it may be imparted by steeping vine leaves, or the leaves of parsley, or spinach, in the vinegar; a tea-spoonful of olive oil is frequently added to each bottle to keep the pickles white.

## TO PRESERVE CABBAGES.

Cut them so that they may have two inches stem left below the leaves; scoop out the pith as far down as a small knife will reach; then suspend them, by means of a cord, exactly perpendicular, but in an inverted position, and daily fill up the hollow part of the stem with clean water. It is stated, that by this method, cabbages, cauliflowers, broccoli, celery, &c., may be preserved for some time in a cool place; it affords an easy means of keeping a supply of green vegetables during the winter.

## DECANTERS.

There is often much difficulty experienced in cleaning decanters, especially after port wine has stood in them some time. The best way is to wash them out with a little pearl ash and warm water, adding 1 spoonful or two of fresh slaked lime, if necessary. To facilitate the action of the fluid against the sides of the glass, a few small cinders may be used. Another annoyance which frequently occurs, is that the stoppers of glass bottles and decanters become fixed in their places so firmly, that the exertion of sufficient force to remove them would endanger the vessels. In such cases, knocking the stopper gently with a piece of wood, first on one side, and then on the other, will generally loosen them. If this method does not succeed, a cloth wetted with hot water and applied to the neck, will generally expand the glass sufficiently to allow them to be easily withdrawn.

## CHINA.

Is best cleaned, when very dirty, with finely powdered fuller's earth and warm water, afterwards rinsing it well in clean water. A little clean soft soap may be added to the water instead of fuller's earth. The same plan is recommended for cleaning glass.

# THE ILLUSTRATED LONDON ALMANACK FOR 1847.

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Six Directors are elected annually in April, when six go out by rotation. Each Director serves four years. The figure prefixed denotes the number of years each has to serve.

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## CONSULATE AND PASSPORT OFFICES.

**FRANCE.**—French passport-office, 6, Poland-street, Oxford-street, from 11 to 5; delivered next day between 1 and 3, on personal application, gratis; also at the Consul's office, between 12 and 4—fee 10s.  
**BELGIUM.**—Legation, 9 A, Weymouth-street, Portland-place, between 11 and 3; delivered next day between 11 and 2, gratis; at the Consul's office, between 10 and 4—fee 5s.  
**SPAIN.**—Visas to Foreign Office. Passports to British subjects, at the Legation, between 11 and 3, gratis; passports to natives at the same time and place.  
**PORTUGAL.**—Embassy, 57, Upper Seymour-street, Bryanstone-square, between 11 and 4, delivered following day; also at Consul's office.

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Astronomical appearances of the Months. Accurately illustrated.  
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The First Page of each month is headed by a beautiful allegorical design by KENNY MEADOWS, and engraved by LINTON.  
The Second Page of each month is devoted to Astronomical Appearances and Occurrences. It forms a Popular Treatise on the Astronomy of the Current Year, with much that is applicable at all times, and, therefore, it has a permanent interest. The whole of these calculations were performed under the immediate superintendence of JAMES GLAISHER, Esq., F.R.A.S., and of the Royal Observatory, Greenwich.  
The Third Page of each month is headed by a graceful Illustration of its Sports, Pastimes, and Pursuits; accompanied by Notes upon its Feasts and Fasts, and brief Notices of the Festal Observances by which the several Holidays have been transmitted through ages unto

our own time. Throughout the Illustrations, the Artist has associated the Ages of Man with the Natural Appearances of the Year in each Month; the epigraphs to each being quoted from a quaint old poem—"The Age and Life of Man: a Short Description of the Nature, Rise, and Fall, according to the Twelve Months of the Year."  
The Fourth Page of each month is devoted to its Natural History; which needs no explanation, further than that, in writing the article, the best authorities have been consulted. This department has been written by Mr. GLAISHER. The whole of the drawings in this and the Astronomical section, have been made by Mrs. GLAISHER.

### MISCELLANEOUS.

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The above Almanacks have been reprinted, and may be had at the Office of the ILLUSTRATED LONDON NEWS, 195, STRAND.

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